USER MANUAL

IPCAM-8318IR

CTC Union Technologies Co., Ltd.

LEGAL

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User Manual

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This manual supports the following：

IPCAM8318IR IP Camera

This document is the first official release manual. Please check CTC Union's website for any updated manual or contact us by E-mail at info@ctcu.com. Please address any comments for improving this manual or to point out omissions or errors to marketing@ctcu.com. Thank you.

CTC Union maintains a support web site (support.ctcu.com) where you may obtain the latest manual, quick installation guide, and operational firmware. Membership to this web site is free, however, you must be a registered member in order to access any software updates.

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8318IR IP Camera

User Manual

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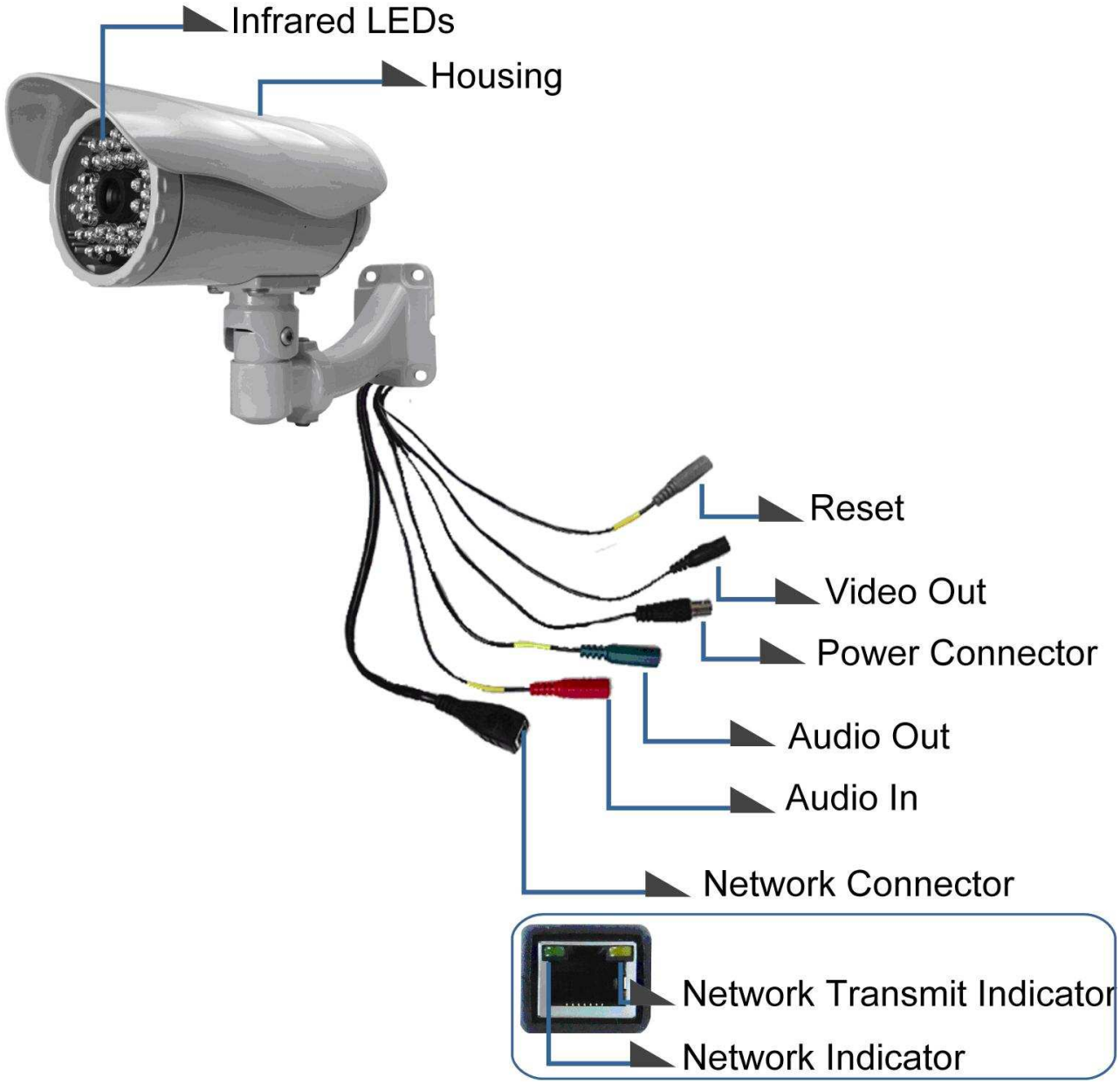
User Manual

Overview



- **Housing-** IP66 related protection against dust and heavy rain
- **Reset -** When the device is empowered, press the Reset Button to reboot the device, or hold the Reset Button for 10 seconds to set the device settings back to factory default.
- **Infrared LEDs-** Infrared LEDs for night use up to 35 working distance
- **Video out (BNC) -**To support analog out for easy use
- **Audio In (Red Line) -**To support audio in with Microphone for two way audio
- **Audio Out (Green Line) -** To support audio out with earphones or speakers for two way audio

- **Network Connector -** For connection to the Ethernet via RJ-45 standard with PoE
  - **Network Indicator (Green Light) -** Green light will light up after the IP Camera connected with network and IP Camera completed the boot process.
  - **Network Transmit Indicator (Yellow Light) -** Yellow light will light up while transmitting data via internet
- **Power Connector -** For connection of 12V DC input

Chapter 1. Minimum System Requirement

We strongly recommend your computers follow our minimum requirements in order to use this IP-Camera normally. If computer level is lower than this, it might cause some problems.

Item	Requirements
CPU	Pentium 4 1600MHz (or equivalent AMD)
Graphic Card	64 MB RAM graphic cards(or equivalent on-board graphic cards)
RAM	512 MB
Operating System	Windows 98, Windows ME (Please see Note) Windows2000, 2003, XP, Vista, Mac OS X Leopard
Web Browser	Internet Explore 6 or later

Note:

1. If you are using Windows 98 or Windows ME, please install IP Installer before using WEB UI to ensure the system runs normally.

2. If you can't view the record video file, please install Xvid codec while installing Intelligent IP Installer. (For Windows 98, ME or 2000 server, the codec might not work properly. You'll need to download Xvid codec 1.0 from the internet.

3. Please always update the latest Windows component. (.Net Framework, Windows Media Player, Enhance ActiveX Security)

Chapter 2. Using IP Camera via Web Browser

2.1Windows Web Browser

1. Start your web browser, and enter the IP address or host name of the IP camera in the Location / Address field of your browser.

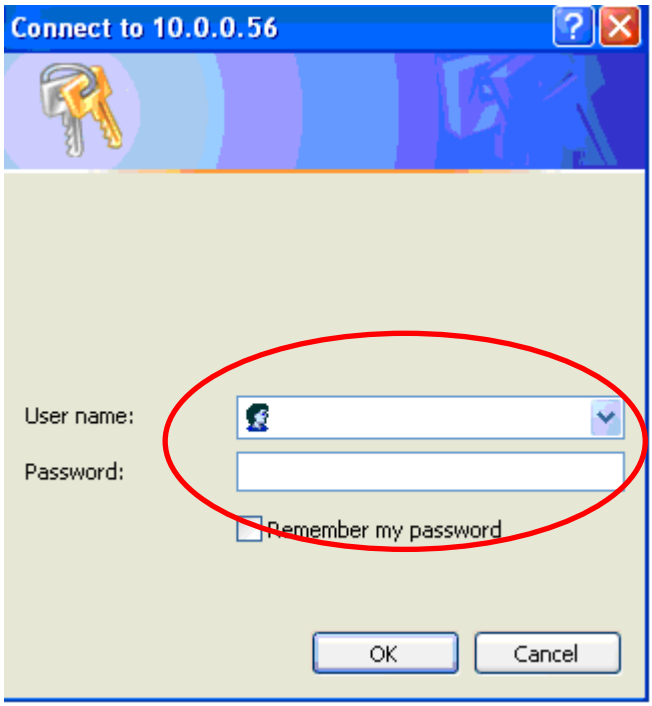
Note :

If you only want to view the video without setting page, enter "http://<IP>/index2.htm" as your web URL.

2. Use the default account "admin" and default password "admin".

Note :

The default user name "admin" and the password are set at the factory for the administrator. You can change them in the Account Menu (Please check "Setting → Basic → Security → Account")



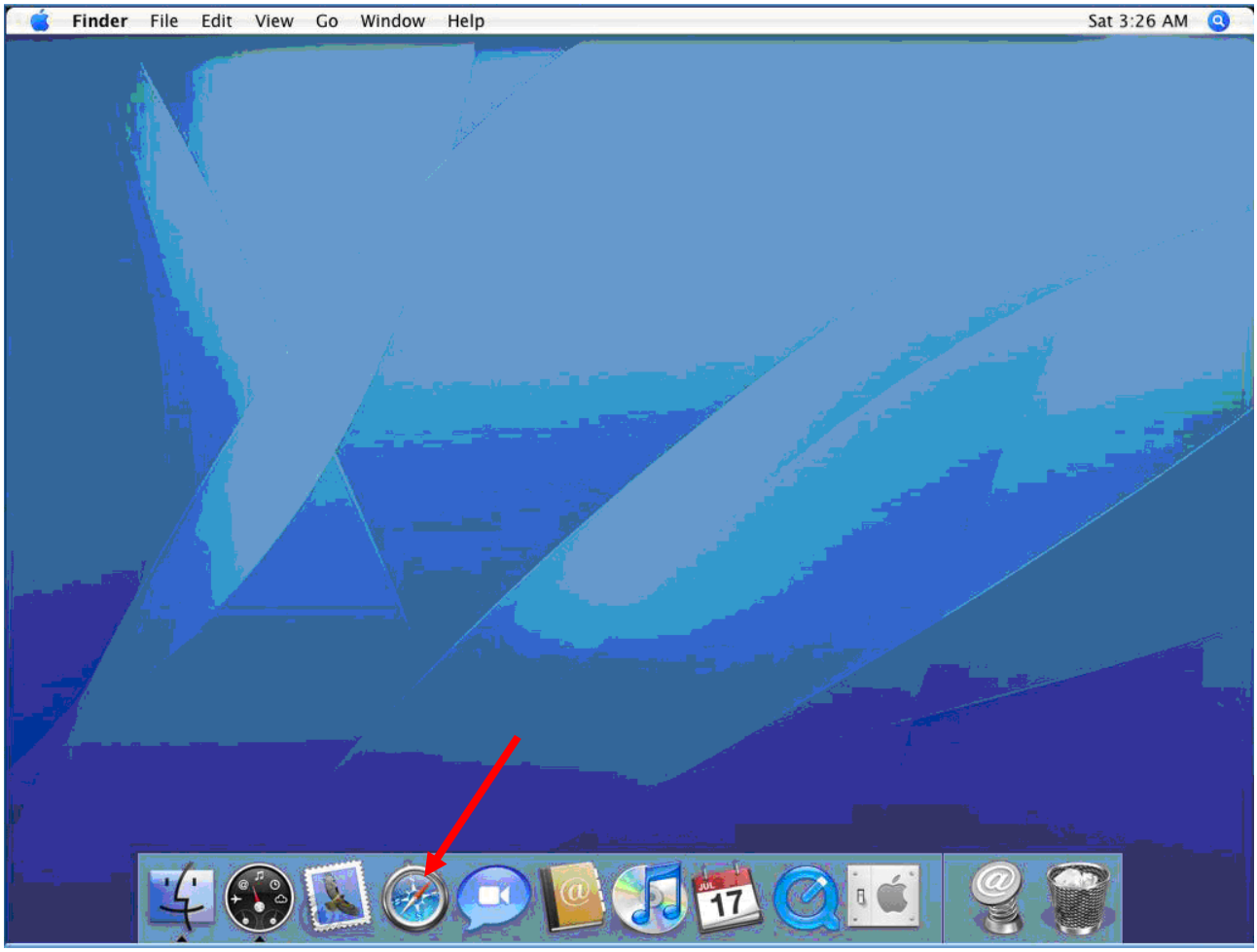
3. The monitor image will be displayed in your browser. In the far left side of main configuration are Setting, Client Setting, and Image Setup. For more details, you can check Chapter 4.2、Chapter 4.3、Chapter 4.4.

2.2 Mac Web Browser

1. Click the Safari icon, and enter the IP address of the IP camera in the Location / Address field of your browser.

Note :

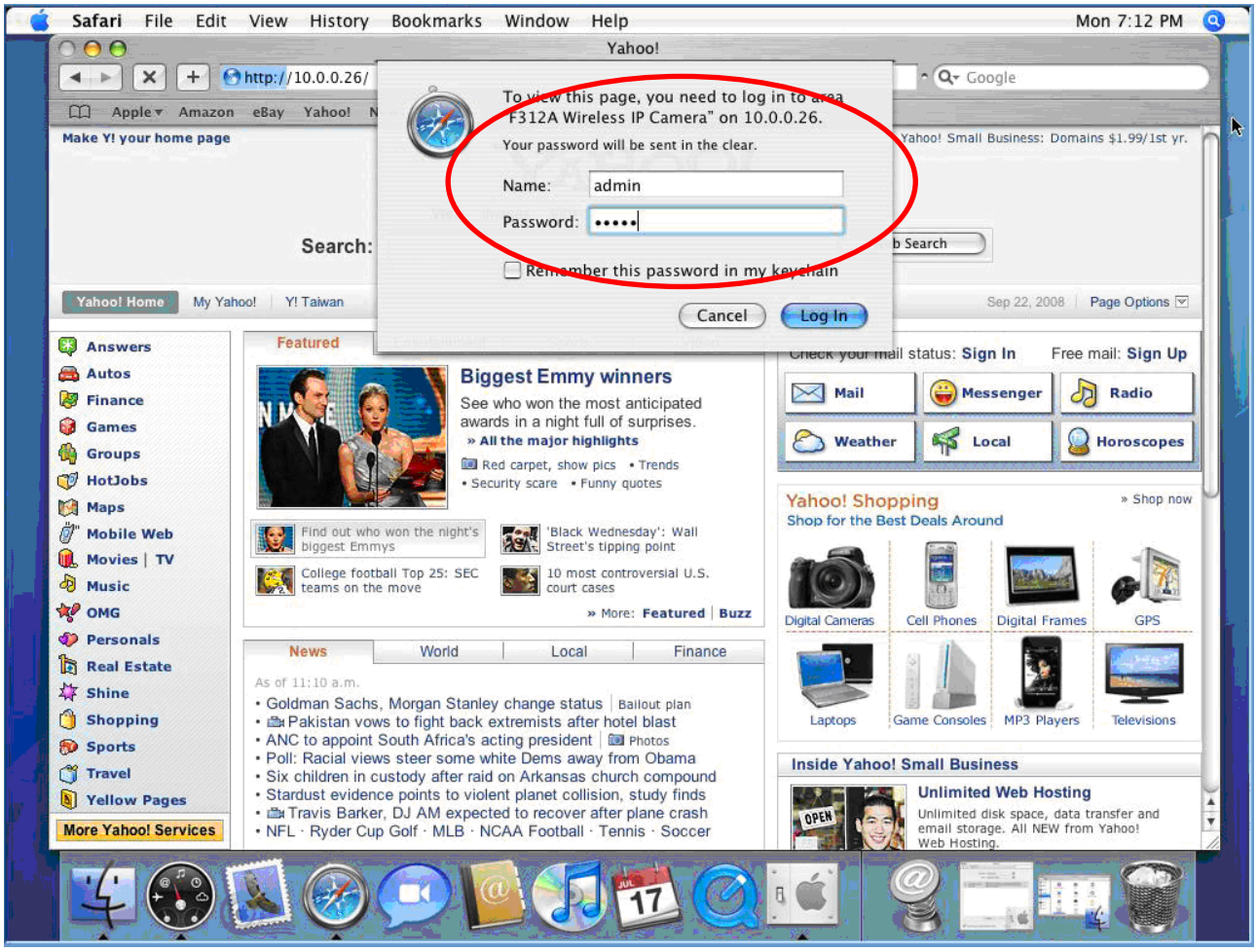
If you only want to view the video without setting page, enter "http://<IP>/index2.htm" as your web URL.



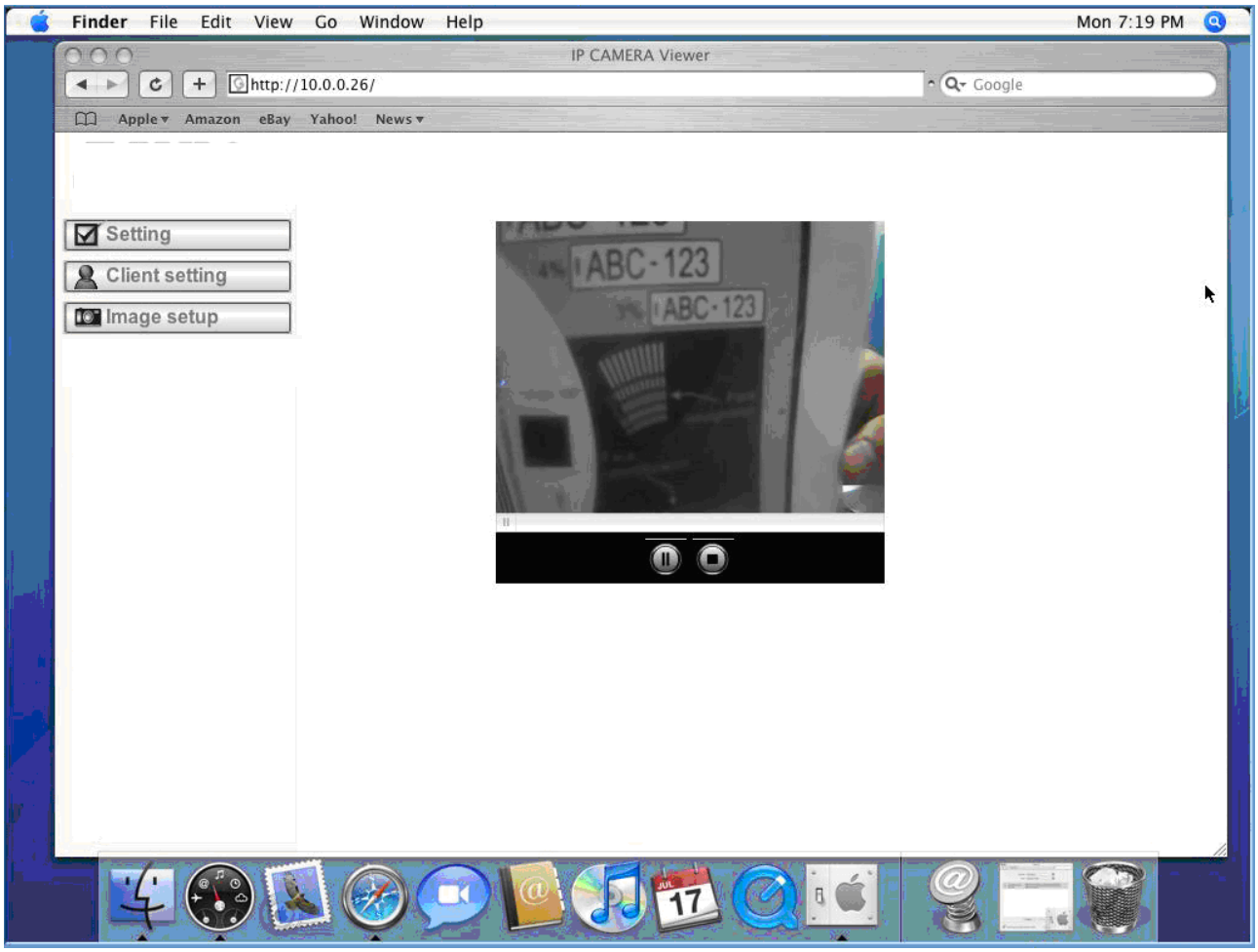
2. Use the default account “admin” and default password “admin”.

Note :

The default user name “admin” and the password are set at the factory for the administrator. You can change them in the Account Menu (Please check “Setting → Basic → Security → Account”)

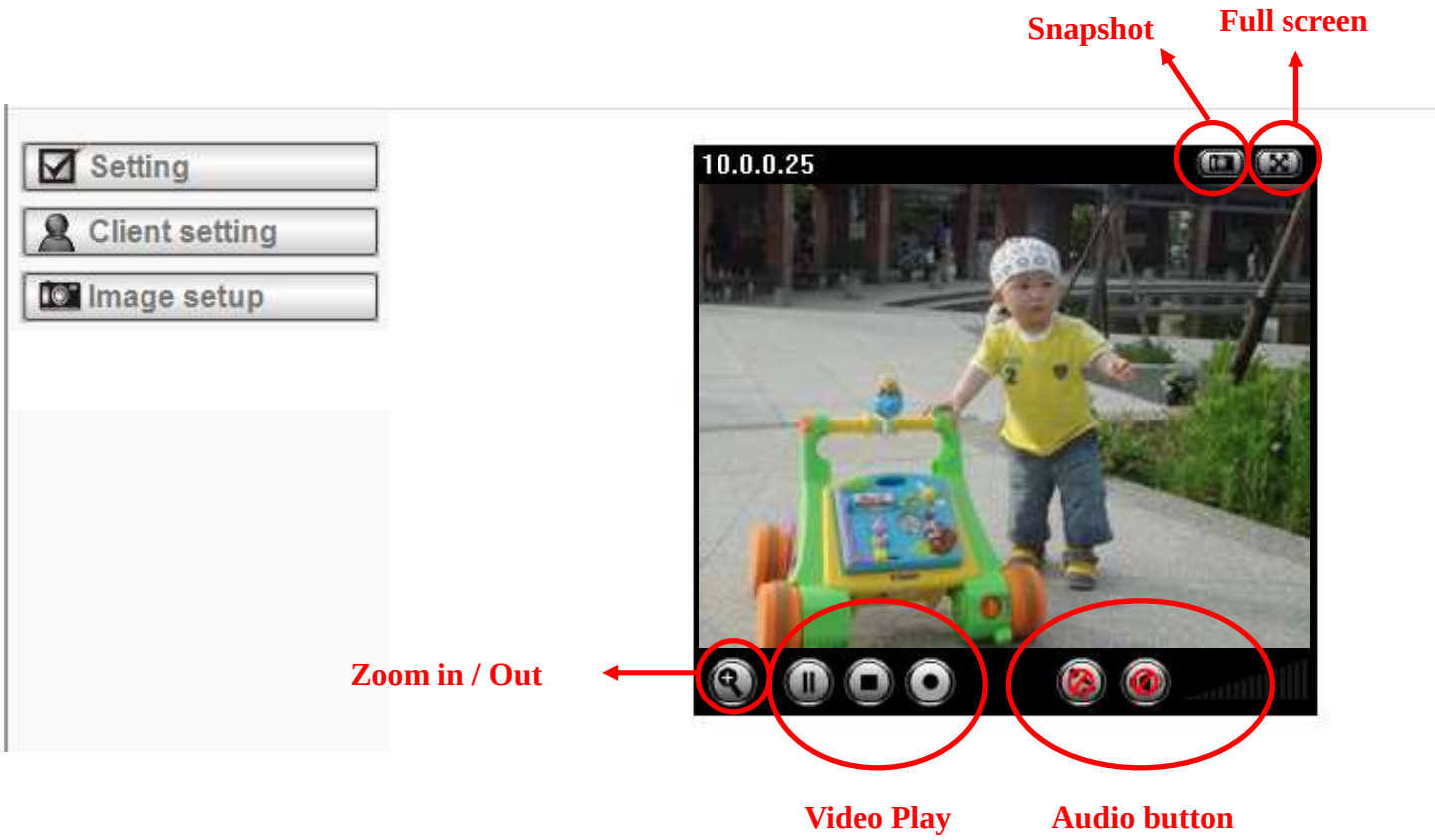


3. The monitor image will be displayed in your browser. In the far left side of main configuration are Setting, Client Setting, and Image Setup. For more details, you can check Chapter 4.2、Chapter 4.3、Chapter 4.4.



Chapter3 . Configuration of Main Menu

In the far left side of main configuration are Setting, Client Setting, Image Setup. For more details, you can check Chapter 4.2、Chapter 4.3、Chapter 4.4.



In your right hand side, you can use Live View in your main Browser. There are Snapshot, Zoom and Audio and Video Play four different function. You can see more details as follow.

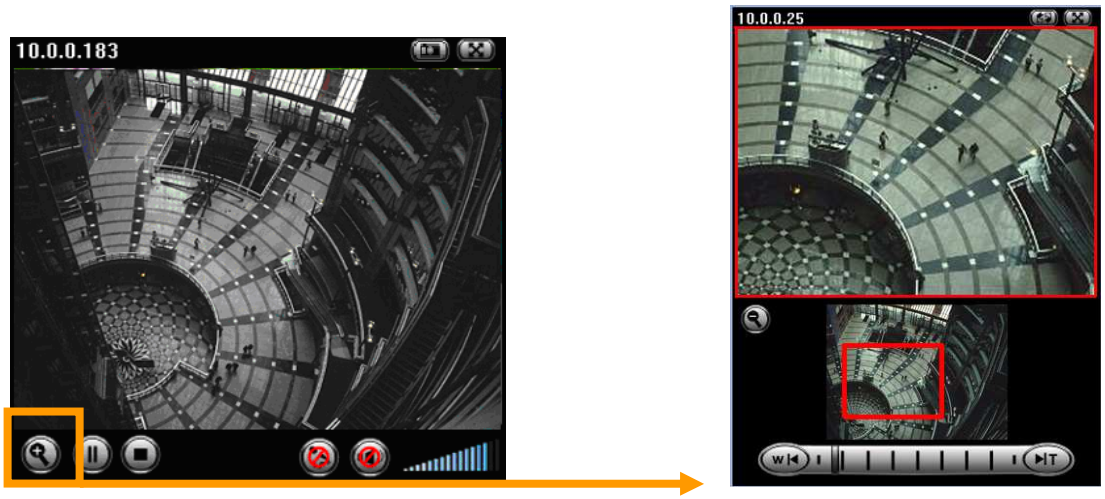
3.1 Live View

A. Snapshot

You can capture a still image shot by the camera and save it in your computer.

Symbols	Meaning
	a snapshot window will appear
Save	to save the picture in your computer
Close	to return to the view page
	full Screen

B. Zoom in / out the image via the monitor window



- Click to display the digital zoom in window.
- Pull the to adjust the digital zoom range, and it will be showed on the above window.
- You can use the left click of your mouse to move the to any where on the window.

C. Video play buttons

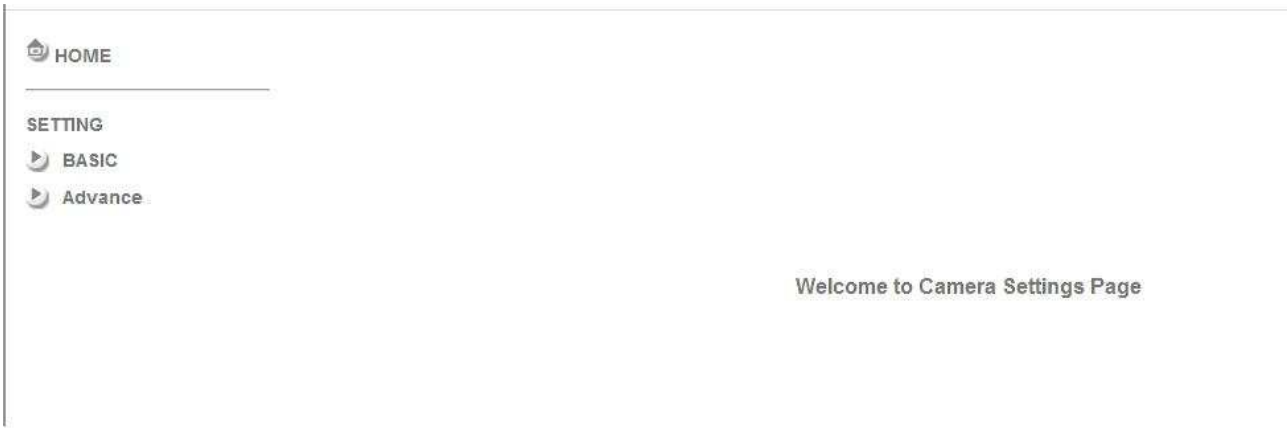
Symbols	Meaning
	Pause the current video
	Play the video
	Stop the current video
	Record the current video

D. Audio buttons

Symbols	Meaning	Note
	Speakers turned on	**mean the speakers of your computer are turned on to transmit the sounds from the connected IP camera(s)**
	Speakers turned off	
	Microphone turned on	**mean you can broadcast to the connected IP camera(s) via the Ethernet using your microphone**
	Microphone turned off	
	Volume control bar	

3.2 Setting

This function is only for the Administrator. Click this button to get into the **Basic** and **Advance settings** menu.

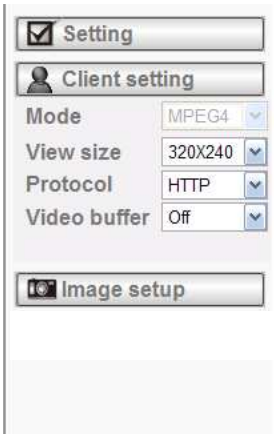


Click Basic folder, there are four sub-folders including System, Camera, Network, and Security. Fore more information, you can see Chapter 5.1、Chapter 5.2、Chapter 5.3 and Chapter 5.4.

Click Advance folder, there are four sub-folders including FTP Client, SMTP, HTTP event, Schedule, Alarm buffer, Motion Detection, and System Log. Fore more information, you can see Chapter 6.1、Chapter 6.2、Chapter 6.3、Chapter 6.4、Chapter 6.5、Chapter 6.6、Chapter 6.7.

3.3 Client Setting

This function is only for the client.



Click this button to control **Mode, View Size, Protocol,** and **Video Buffer.**

3.3.1 Mode

Click the pull-down box to choose between MPEG4 and MJPEG video compression mode.

MJPEG streaming is unavailable if RTSP mode is “On.”

(Please check Setting → Basic → Camera → General)

Note：MJPEG streaming is unavailable if RTSP mode is On.

3.3.2 View Size

Select the desired display image resolution to 640X480 or 320X240.

3.3.3 Protocol

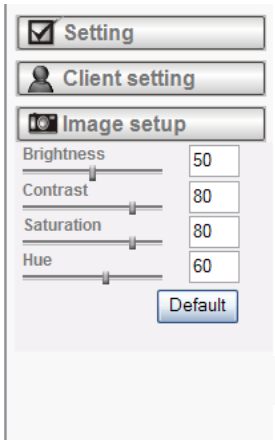
Select the transferring protocol from TCP, UDP, HTTP and Multicast.

3.3.4 Video Buffer

Turn the Video Buffer function ON / OFF. The Video Buffer function makes the streaming more smoothly in unsteady network environment, but might cause a little delay in live viewing.

3.4 Image Setup

You can use the tool bar to optimize video **Brightness, Contrast, Saturation** and **Hue.**



3.4.1 Brightness

The higher value the brightness is, the brighter the image is.

3.4.2 Contrast

The contrast is a measure of a display system, defined as the ratio of white to black that the system is capable of producing. The higher value the contrast is, the more delicate of color you can have.

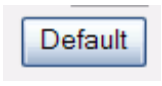
3.4.3 Saturation

The saturation of a color is determined by a combination of light intensity and how much it is distributed across the spectrum of different wavelengths. The higher value the saturation is, the more colorful the image will be.

3.4.4 Hue

Hue is one of the three main attributes of perceived color, affected by different wavelength of color. With higher value of hue, color will be much more vivid.

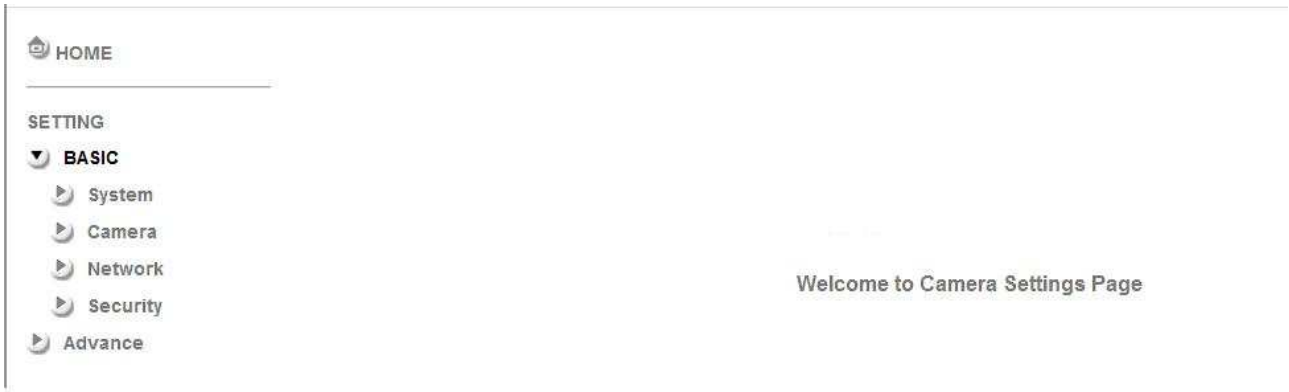
3.4.5 Default



After the adjustment of all setting, you can still click Default to make the setting back to the original setting.

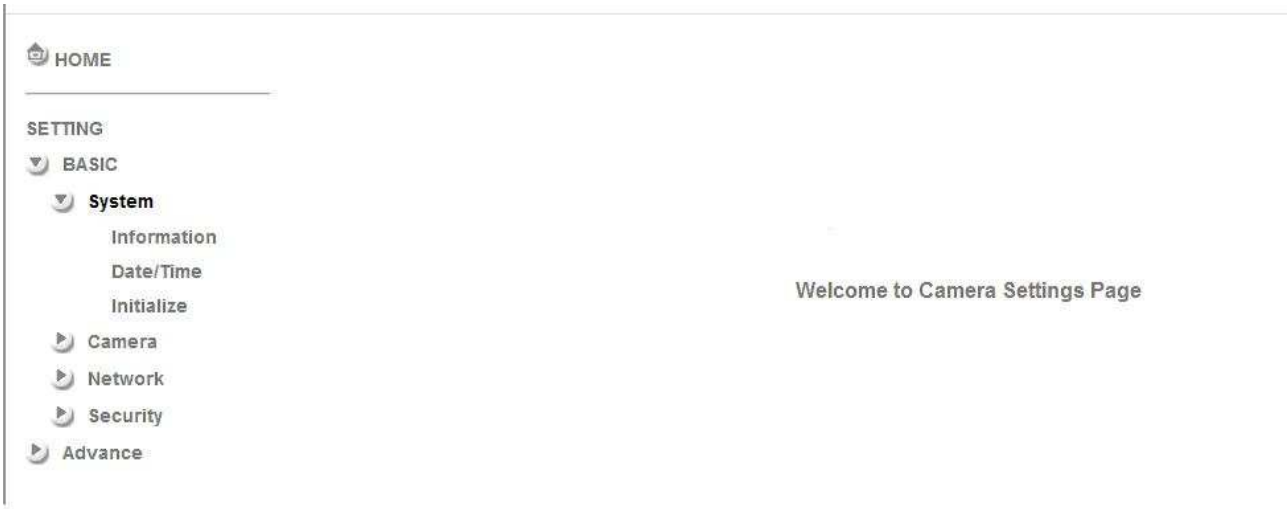
Chapter 4. Setting-Basic

Click the folder of **Basic** to display the sub folders including **System, Camera, Network, and Security.**



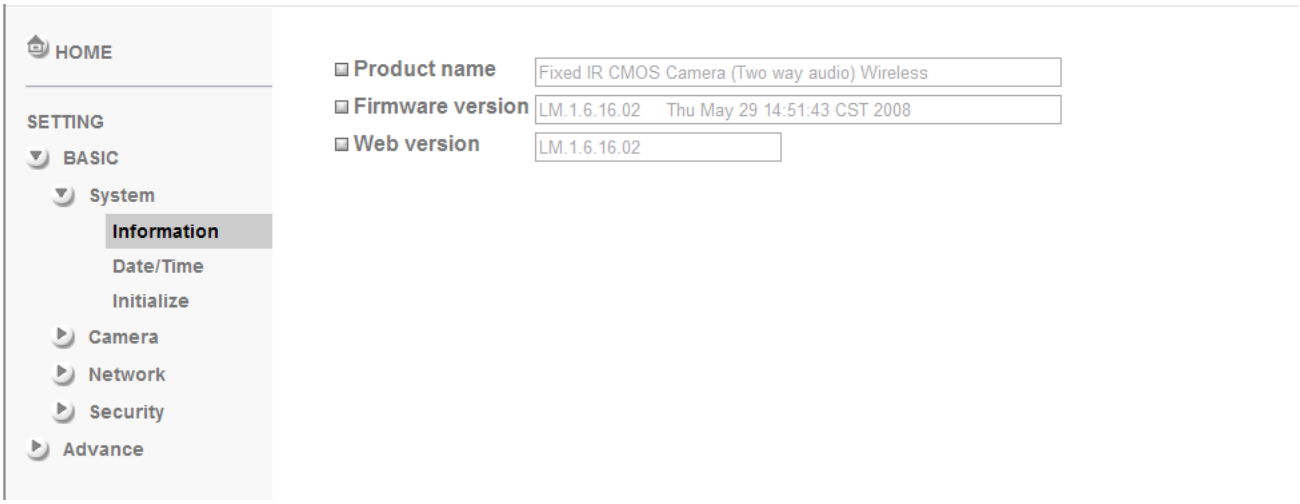
4.1 System

Click the folder of **System** to display the sub-folders including **Information, Date / Time, and Initialize.**



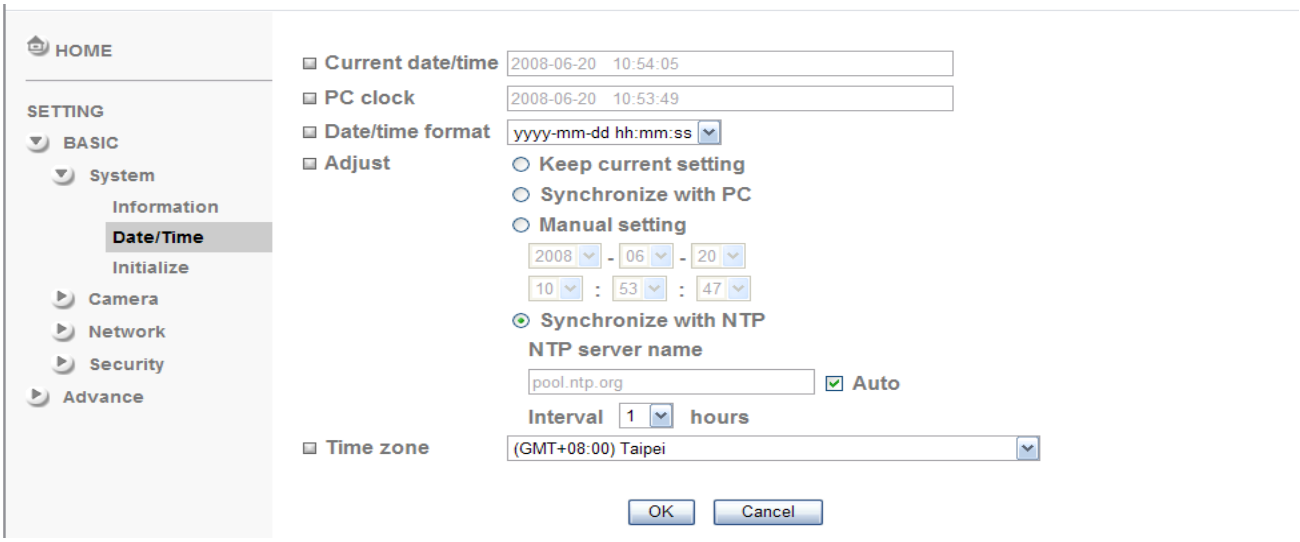
4.1.1 Information

The Information page provides the product factory information which includes **Product Name, Firmware Version and Web Version.**



4.1.2 Date / Time

The Date/ Time page displays all options of time setting.



➢ **Current date / time**: This displays the current date and time of this IP Camera.

➢ **PC clock**: This displays the date and time of the monitoring PC clock.

➢ **Date / Time format**: You can click the pull down box to select different time display formats.

➢ **Adjust**: You can select one of those four adjusting modes for your IP Camera.

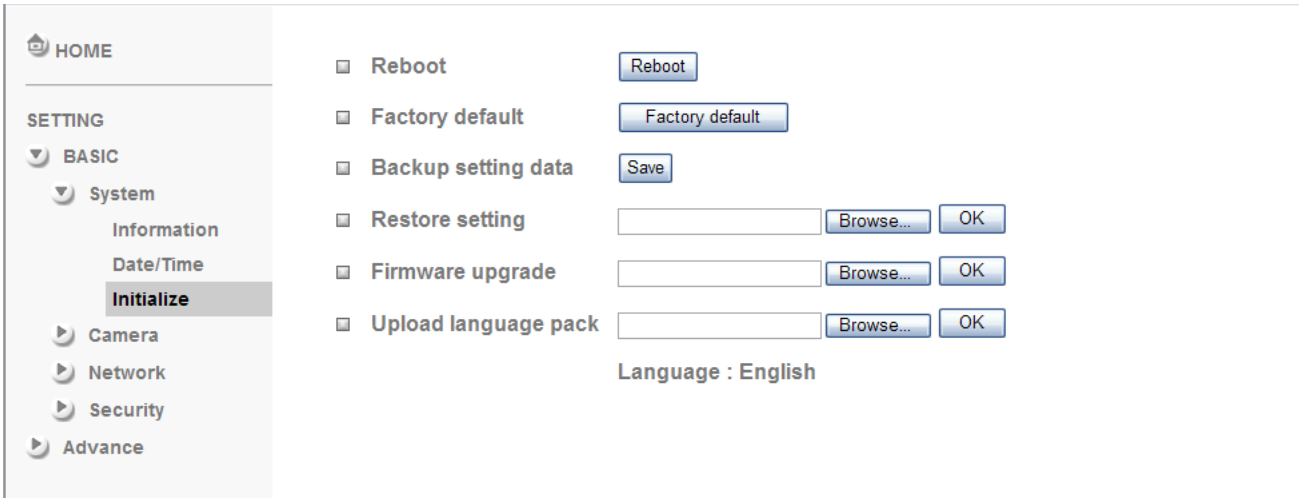
- ●Keep current setting: Select this mode to keep the current date and time of this IP Camera.
- ●Synchronize: Select this mode to keep the date and time of this IP Camera is the same as the monitoring PC.
- ●Manual setting: Select this mode to adjust manually the date and time of this IP Camera.
- ●Synchronize with NTP: Specify the NTP server name and the Refresh Interval to synchronize the date and time of this IP Camera with those of the time server, known as the NTP server.

➢ **Time Zone**: You can select the Time Zone of the format from Greenwich Mean Time. The time will display the same as the current date / time option.

Note:

The NTP server (Network Time Protocol) is the time server which is an Internet standard protocol built on the top of TCP / IP. This assures accurate synchronization to the millisecond of computer clock times in a network of computers.

4.1.3 Initialize



➢ **Reboot**: Click this bottom to reboot this IP Camera. A confirmation dialogue will appear and then click “OK” to process. It takes two minutes to reboot this IP Camera.

➢ **Factory Default**: Click this bottom to reset this IP Camera to the factory default setting. A confirmation dialogue will appear and then click “OK” to process. The network indicator on this IP Camera will start to blink. This IP Camera will reboot automatically after completing adjustments to the default setting. Don't turn off this IP Camera until the device reboots.

➢ **Backup Setting**: You can save the setting data of this IP Camera into a file. Click “Save” and follow the instructions on the browser to save the setting data file to your specified location.

➢ **Restore Setting**: Download the saved setting data of this IP Camera. Click “Browse” and select saved file. Click “OK” and this IP Camera is adjusted according to the loaded data and then restarted.

➢ **Firmware Update**: Upgrade the device software. Click “Browse” and select the file for upgrading. A confirmation dialogue will appear. Click “OK” to start upgrading. This IP Camera will reboot upon completion.

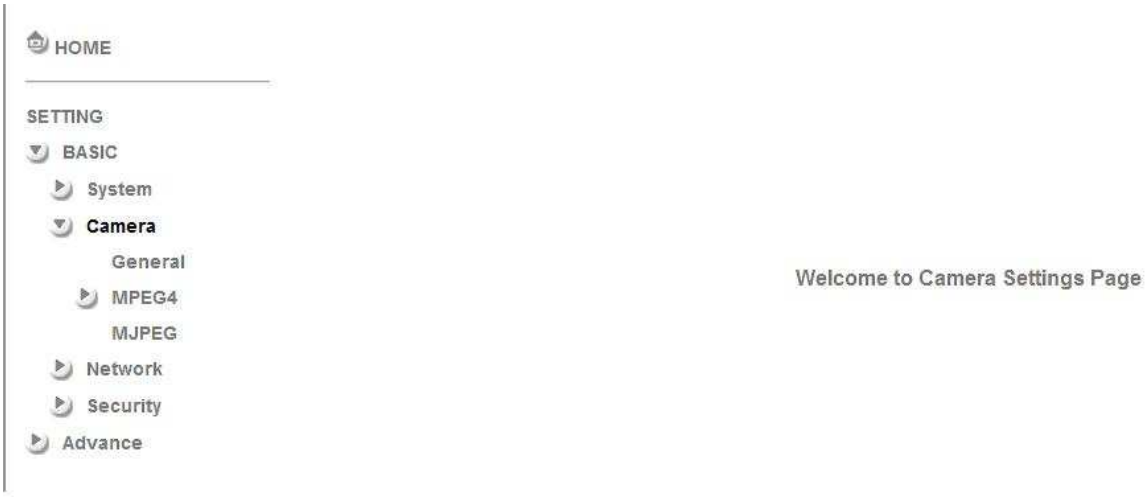
Note:

Use only upgrade files that are special for this IP Camera. Otherwise problems may occur. Don't turn off the IP Camera power or disconnect the network until the upgrading is completed.

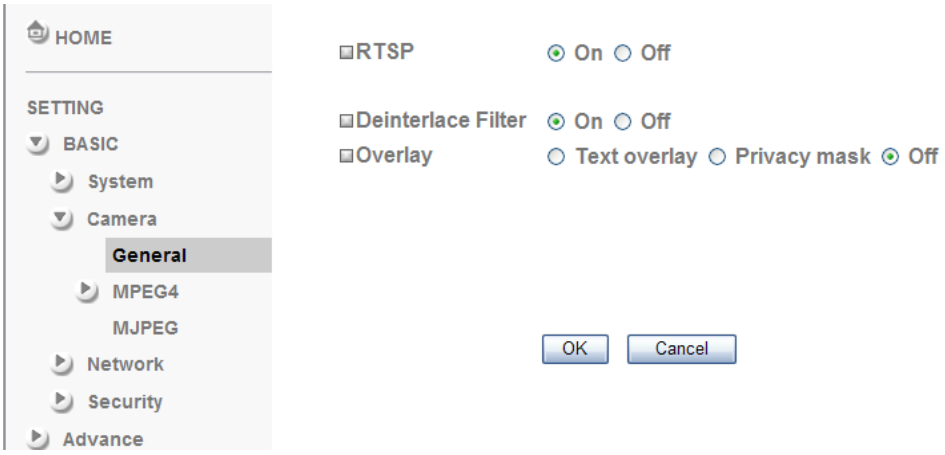
➢ **Upload Language Pack**: Upgrade the device language pack. Click “Browse” and select the file for upgrading. A confirmation dialogue will appear. Click “OK” to start upgrading. The upgrade is applied immediately. The default language is “English.”

4.2 Camera

Click the folder of **Camera** to display the sub folders including **General, MPEG4 and MJPEG.**



4.2.1 General



➢ **RTSP** : Switch On / Off

Note: RTSP (Real Time Streaming Protocol) is a protocol for use in streaming media system which allows clients to remotely control a streaming video server. RTSP is supports by most of the media clients such as Real Player, QuickTime and VLC...etc.

➢ **Deinterlace Filter**: Switch the deinterlace filter On / Off. If you switch the filter On, the

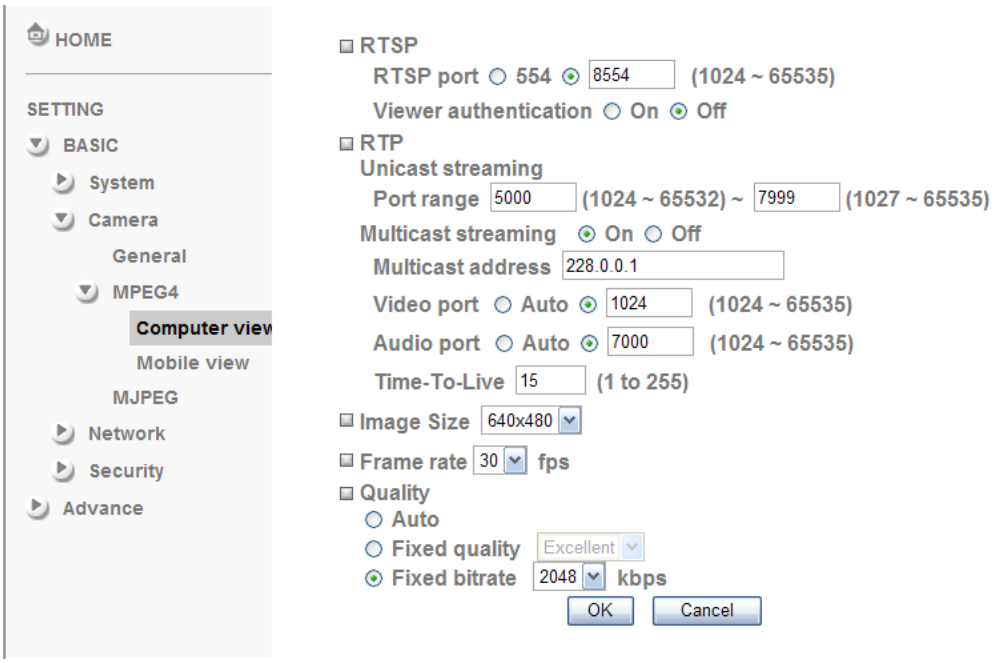
Image quality will be smoother because of the reducing of flickering effect.

➢ **Overlay**:

- ●Text Overlay: You can see some information on the display screen which includes Date / Time and user-defined text. Also, you can change the background color.
- ●Privacy Mask: You can cover a specific area of the video image.

4.2.2MPEG4

A. Computer View



➢ **RTSP (if RTSP mode is On, please check "Setting → Basic → Camera → General ")**

- ●RTSP Port: Specify the transmission port number of RTSP streaming. The default value is 8554.
- ●Viewer Authentication: If the viewer authentication is On, the users will be requested to key-in username and password when viewing through RTSP.

➢ **RTP (if RTSP mode is On, please check "Basic→ Camera → General")**

- ●Unicast Streaming Video / Audio Port Range: Specify the transmission port range of RTP streaming video. RTP will select a port randomly from the range.
- ●Multicast Streaming (If it is ON)
- ●Multicast Address: Specify the multicast server address.
- ●Video / Audio Port: Specify the transmission port number of the video data. Specify an even number from 1024 to 65534.
- ●Time to Live: Set the maximum TTL that multicast can pass through.

➢ **Image Size**: Specify the image size when the network camera transmits. You can choose among 640 x 480, 320 x 240, and 160 x 120.

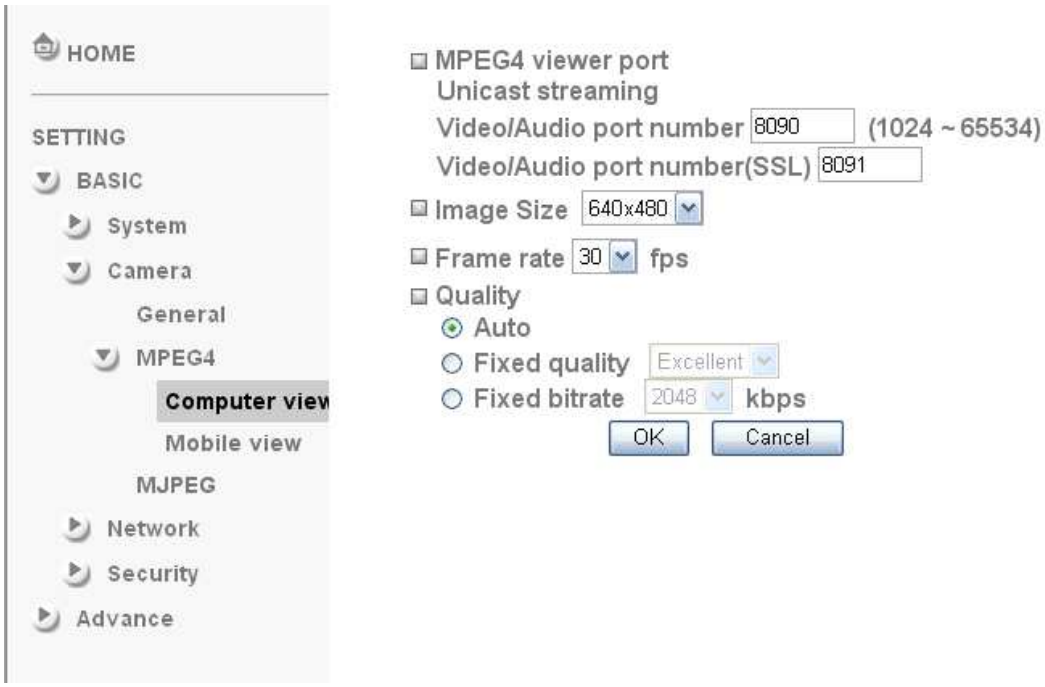
➢ **Frame Rate**: Set the frame rate of the MPEG4 image. You can choose values from 5, 10, 15, 20, 25, and 30 fps. The unit "fps" stands for "frames per second".

➢ **Quality:**

- ●Auto: The quality and bitratee will be adjusted automatically according to the frame rate.

●Fixed Quality: You can select the value of quality among Medium, Good, Delicate and Excellent.

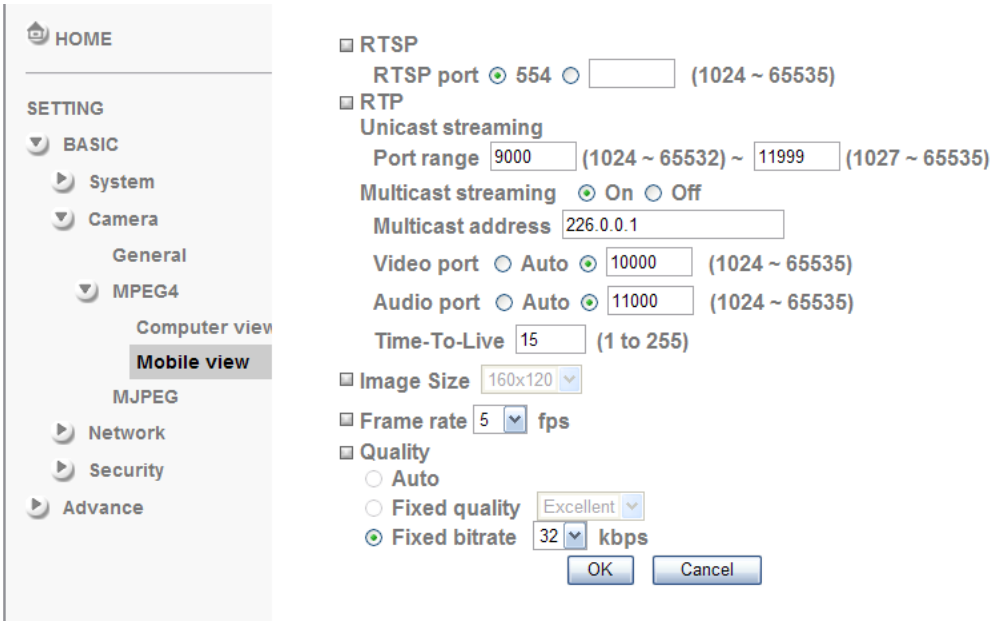
●Fixed Bitrate: Set the bitrate of MPEG4 image transmission for a line. You can select the values from 64, 128, 256, 384, 512, 768, 1024, 1280, 1536, and 2048 kbps.



➢ **MPEG4 view port (if RTSP mode is Off, please check "Basic → Camera → General")**

●Unicast Streaming **Video / Audio Port Number:** Specify the transmission port number of the video data. It is initially set to 8090. You can specify an even number from 1024 to 65534. If you change the setting of Video / Audio Port Number, the setting of Video / **Audio Port Number (SSL) will change automatically.**

B. Mobile View



➢ **RTSP (if RTSP mode is On, please check "Setting → Basic → Camera → General")**

●RTSP Port: Specify the transmission port number of RTSP streaming. The default value is 554.

➢ **RTP (if RTSP mode is On, please check "Setting → Basic → Camera → General")**

●Unicast Streaming Video / Audio Port Range: Specify the transmission port range of RTP streaming video. RTP will select a port randomly from the range.

●Multicast Streaming (If it is On)

- ✓ Multicast Address: Specify the multicast server address.
- ✓ Video / Audio Port: Specify the transmission port number of the video data. It is initially set to 10000 and 11000. Specify an even number from 1024 to 65534.
- ✓ Time to Live: Set the maximum TTL that multicast can pass through.

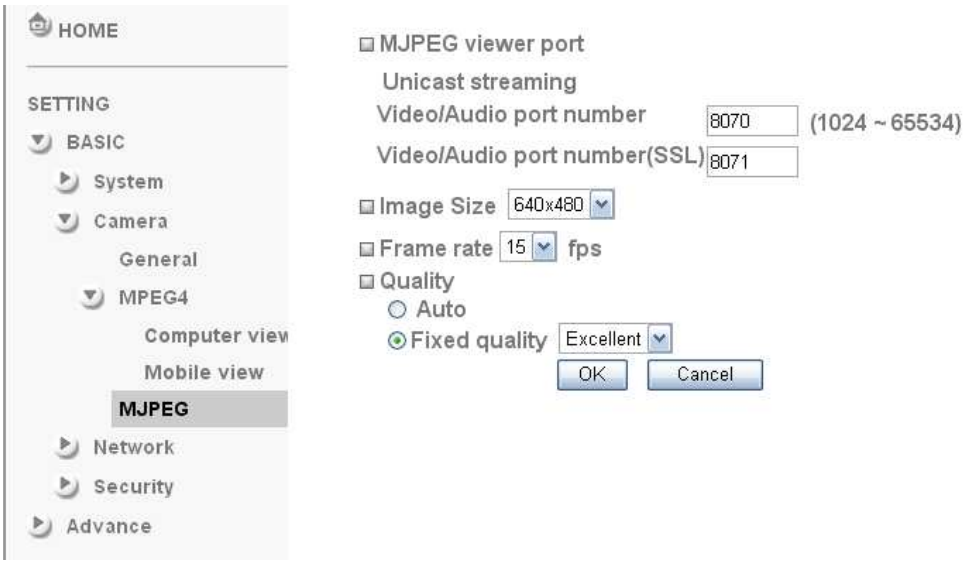
➢ **Image Size**: The image size of Mobile View is fixed at 160 x 120.

➢ **Frame Rate**: Set the frame rate of the MPEG4 image. You can choose values from 5, 10, 15, 20 fps. The unit "fps" stands for "frames sent per second".

➢ **Quality:**

●Fixed Bitrate: Set the bitrate of MPEG4 image transmission for a line. You can select the value from 64, 32, 16 kbps.

4.2.3 MJPEG



➢ **MJPEG Viewer Port(If RTSP is off, please check "Setting → Basic → Camera → General"):**

- Unicast Streaming Video / Audio Port Number: Specify the transmission port number of the video data. It is initially set to 8070. You can specify an even number from 1024 to 65534. If you change the setting of Video / Audio Port Number, the setting of Video / **Audio Port Number (SSL) will change automatically.**

➢ **Image Size**: Specify the image size when the network camera transmits. You can choose among 640 x 480, 320 x 240, and 160 x 120.

➢ **Frame Rate**: Set the frame rate of the MJPEG image. You can choose values from 5, 10, 15 fps. The unit "fps" stands for "frames per second".

➢ **Quality:**

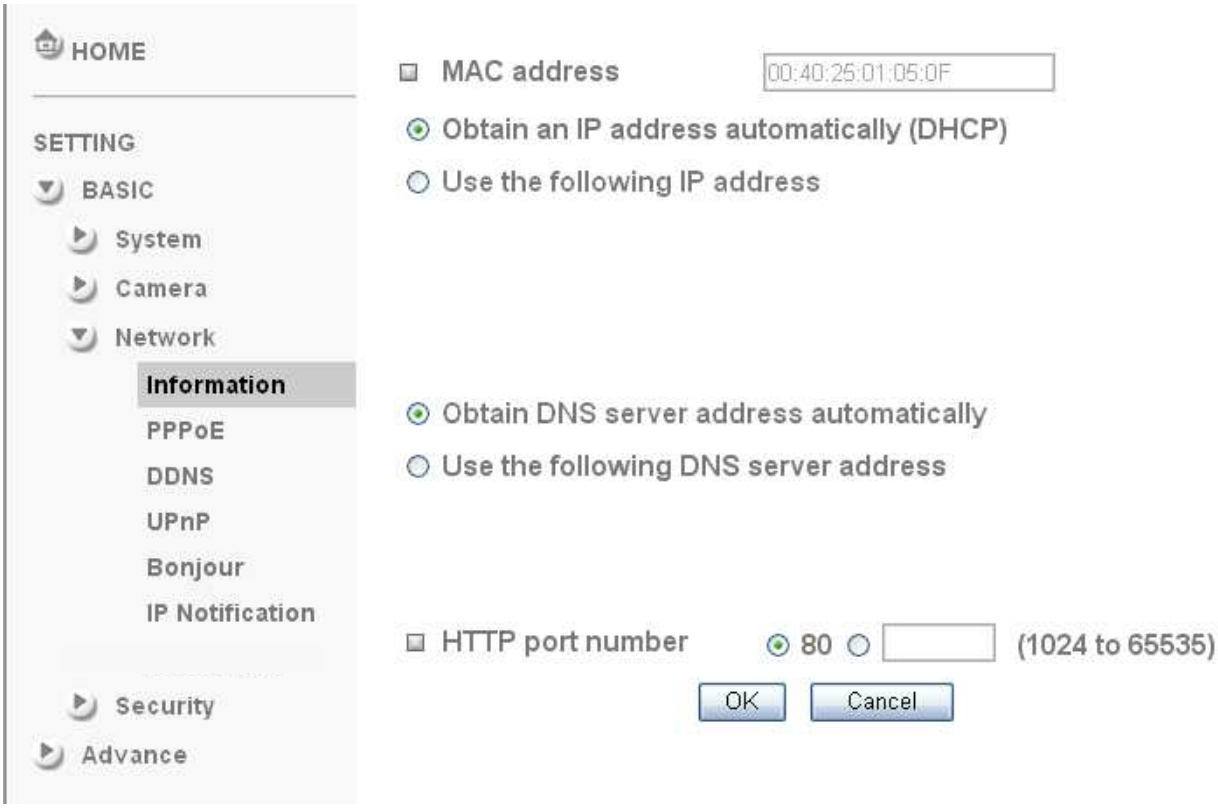
- Auto: The quality will be automatically decided.
- Fixed Quality: You can select the value of quality among Medium, Standard, Good, Delicate and Excellent.

4.3 Network

Click the folder of **Network** to display the sub folders including **Information, PPPoE, DDNS, UPnP, Bonjour, IP Notification.**

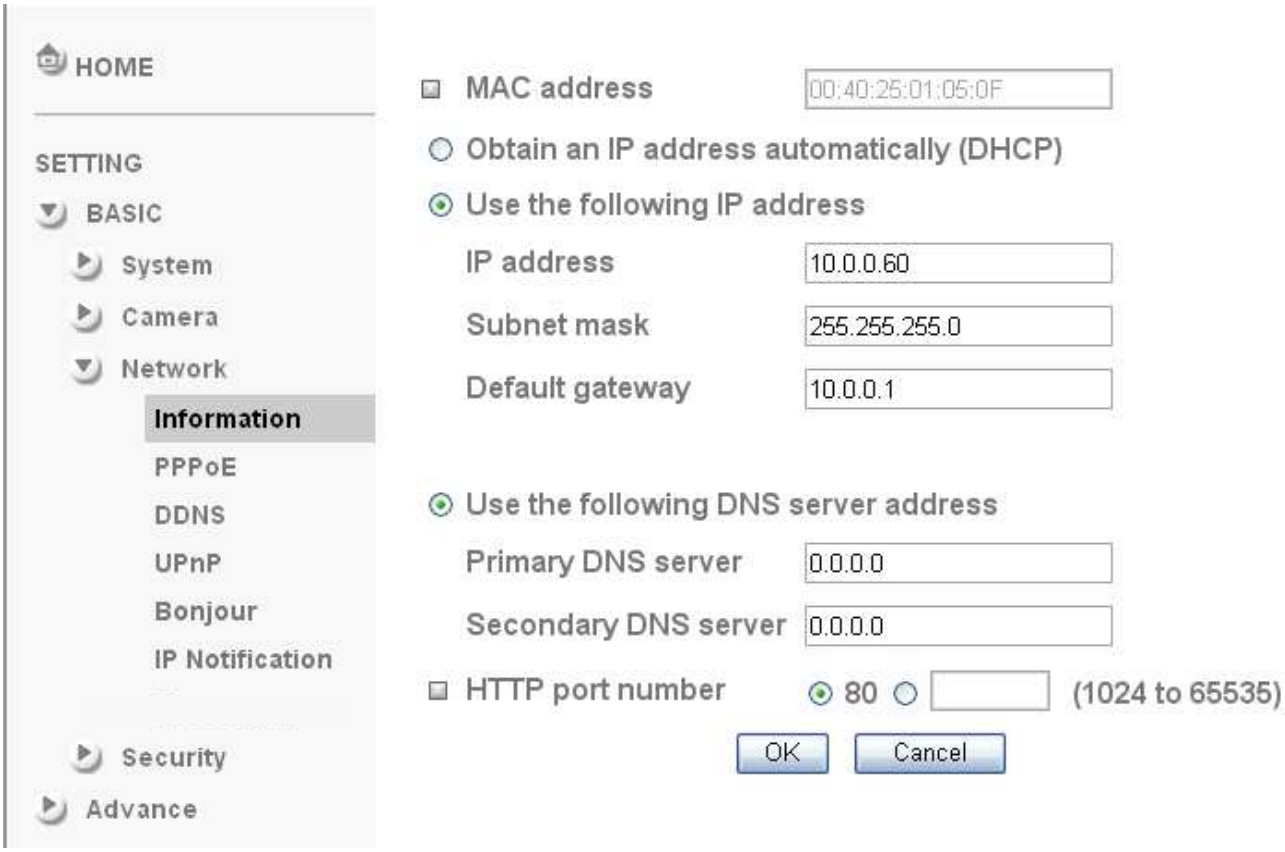
4.3.1 Information

Display the MAC address of the device.



➢ **Obtain an IP address automatically (DHCP)**: If a DHCP server is installed on the network, to select this while the IP address is assigned by the DHCP server.

➢ **Obtain DNS server address automatically**: Select this to obtain the address of DNS server automatically.



➢ **Use the following IP address**: Select this when the fixed IP address is set.

- ●IP address: Enter the IP address of the device.
- ●Subnet mask: Enter the subnet mask.
- ●Default gateway: Enter the default gateway.

➢ **Use the following DNS server address**: Select this when you set the fixed address as the IP address of DNS server.

- ●Primary DNS server: Enter the IP address of the primary DNS server.
- ●Secondary DNS server: Enter the IP address of the secondary DNS server, if necessary.

➢ **HTTP port number**: Select **80** in general situations. If you want to use a port number other than **80**, select the text box and enter a port number between 1024 and 65535.

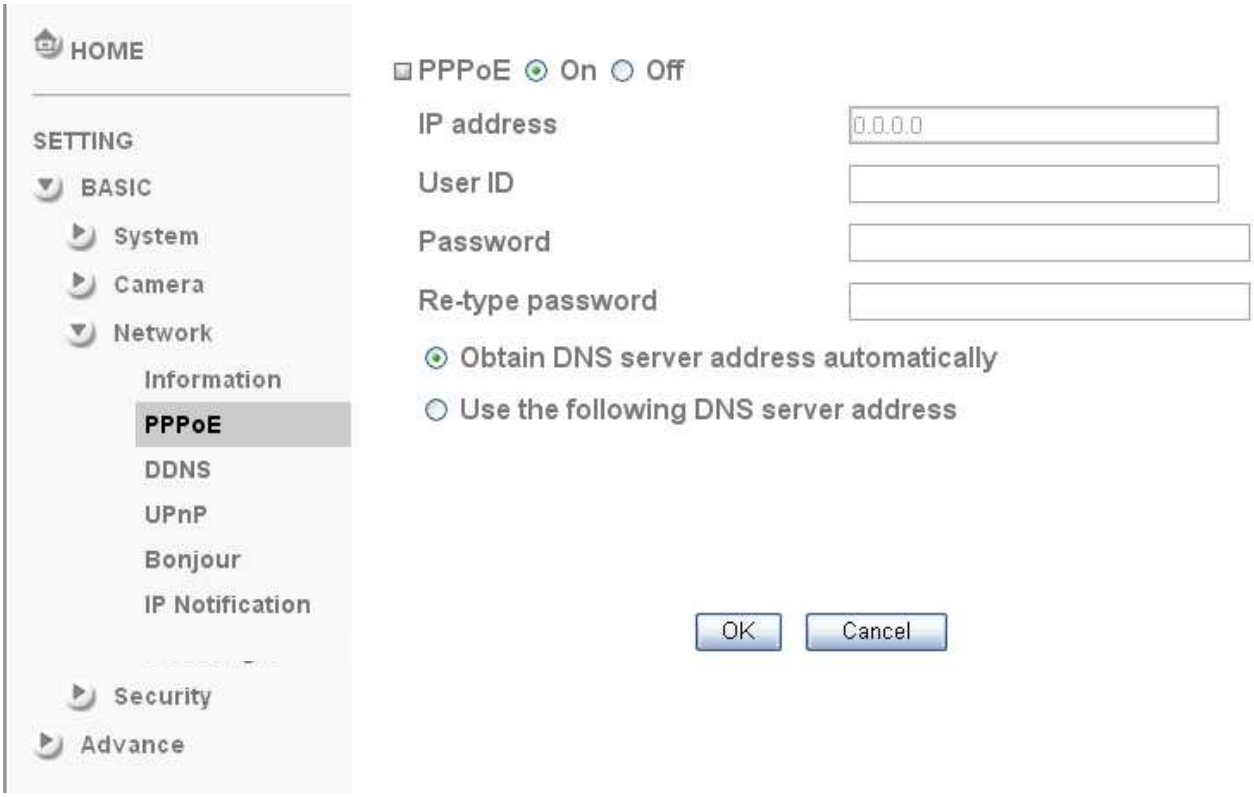
- ●When you have set the HTTP port number to a number other than 80 on the Network setting page or in the Setup Program, access the device by typing the IP address of the device on the web browser as follows: Example: when HTTP port number is set to 2000 http://192.168.1.100:2000/

Note: The IP Camera needs to be rebooted after it finishes changing the network setting completely.

Note: If you connect the IP Camera with your computer directly, the default network domain of camera is 192.168.1.xx

4.3.2 PPPoE (Point-to-Point Protocol over Ethernet)

If your ISP provides Dynamic IP with authentication by username and password, type all PPPoE information in this part. When you use the PPPoE function, you need to turn on the DDNS or IP Notification function at same time.



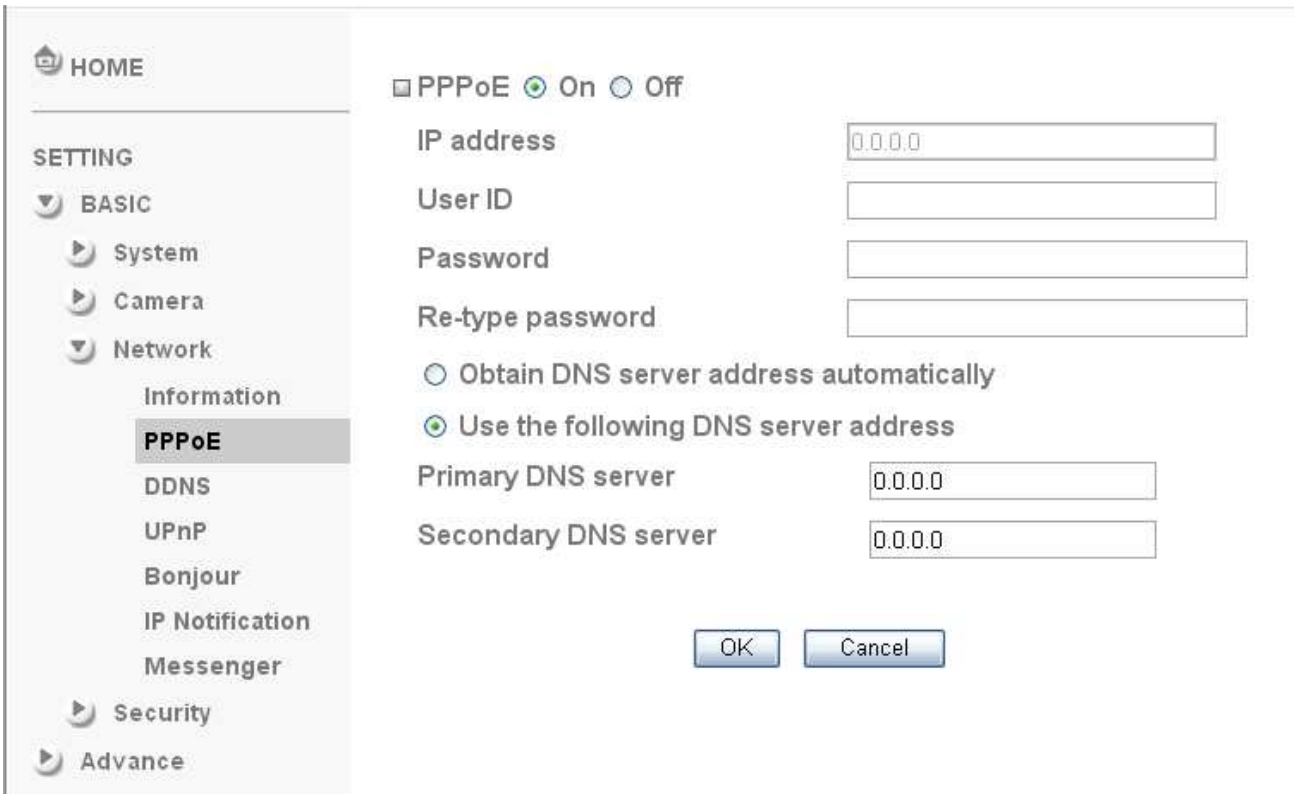
➢ **IP address**: The IP address obtained at the PPPoE connecting with network.

➢ **User ID**: Enter the user ID for authentication necessary for PPPoE connections. Type it up to 64 characters.

➢ **Password**: Enter the password for authentication necessary for PPPoE connections. Type it up to 32 characters.

➢ **Re-type password**: Re-type the password to confirm.

➢ **Obtain DNS server address automatically**: Select this to obtain the address of DNS server automatically.



➢ **Use the following DNS server address**: Select this when you set the fixed address as the IP address of DNS server.

- ●Primary DNS server: Enter the IP address of the primary DNS server.
- ●Secondary DNS server: Enter the IP address of the secondary DNS server.

Note :

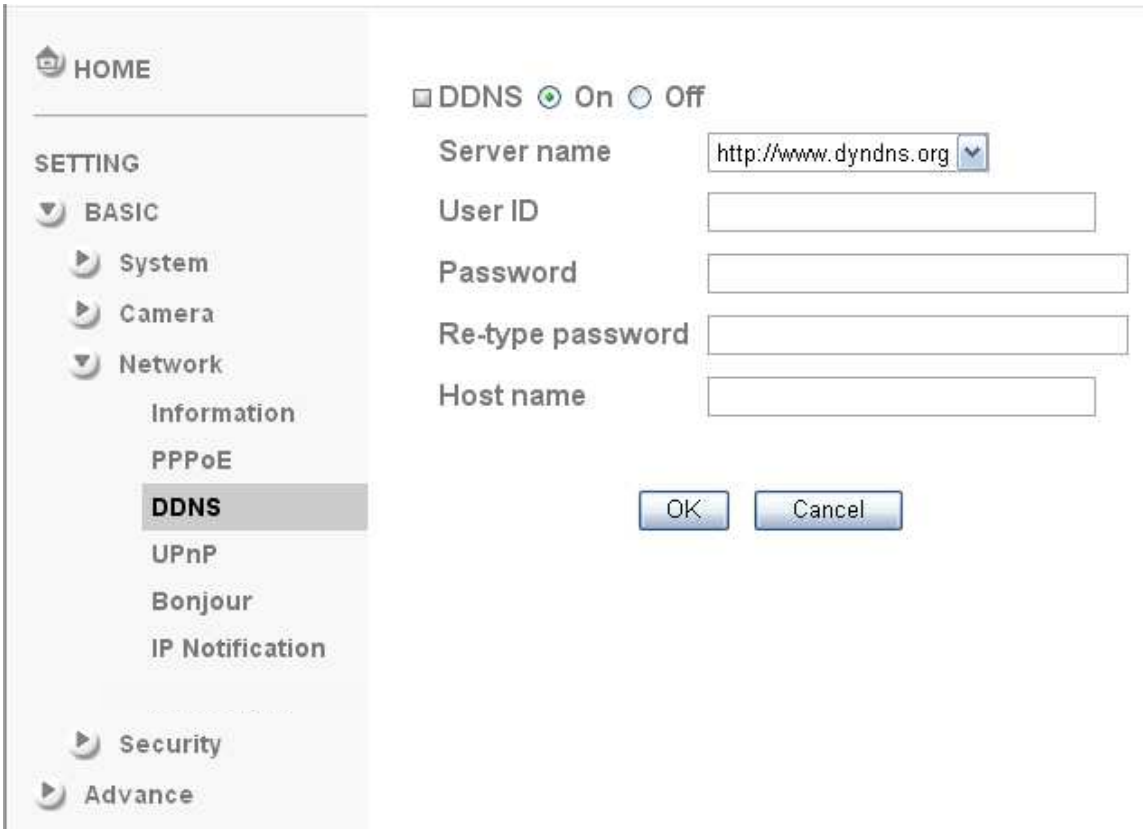
1. PPPoE (Point-to-Point Protocol over Ethernet): PPPoE is a network protocol for encapsulating Point-to-Point Protocol frames insider Ethernet frames. PPPoE connection is used mainly with ADSL service where individual users connect to the ADSL transceiver (modem) over Ethernet work. It also widely used in XDSL (digital affiliate line such as ADSL, VDSL or SDSL)

2. The IP Camera needs to be rebooted after it finishes changing the network completely.

3. The IP Camera with Intelligent IP Installer can't be founded after turning on the PPPoE and reboot.

4.3.3 DDNS (Dynamic DNS)

DDNS is a system which allows the domain name data held in a name server to be updated in real time. The most common use for DDNS is allowing an internet domain name to be assigned to a computer with a varying / dynamic IP Address. This makes it possible for other sites on the internet to establish connection to the machine without needing to track the IP Address themselves.



➢ **Server name**: Choose the DDNS Server from the list.

➢ **User ID**: Enter the user ID for authentication necessary for DDNS connections. Type it up to 64 characters.

➢ **Password**: Enter the password for authentication necessary for DDNS connections. Type it up to 32 characters.

➢ **Re-type password**: Re-type the password to confirm.

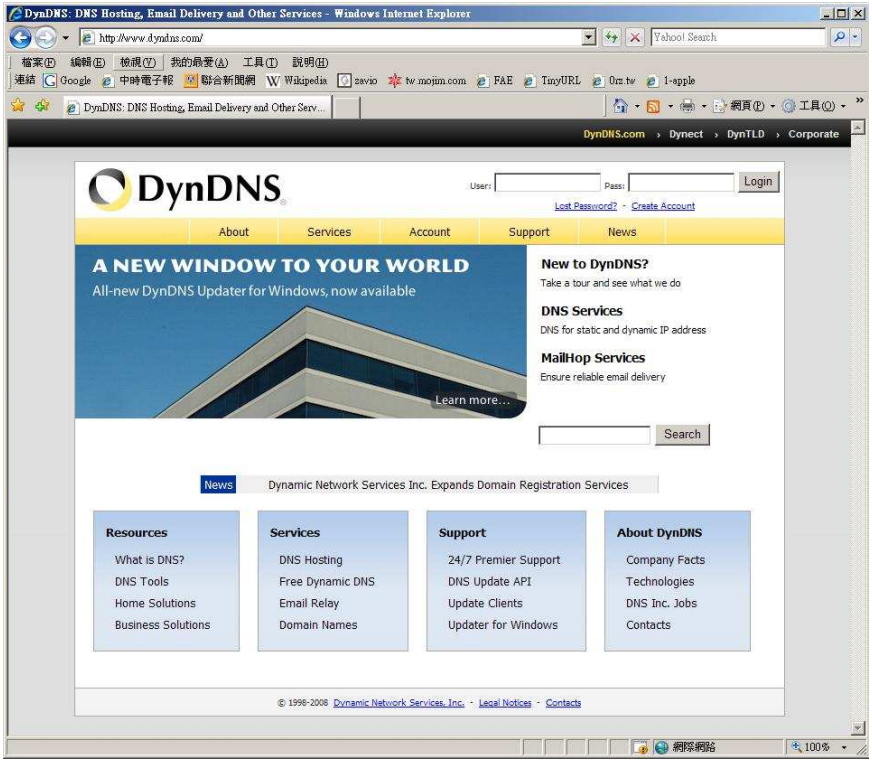
➢ **Host name**: Enter the host name that is registered to the DDNS server.

Note :

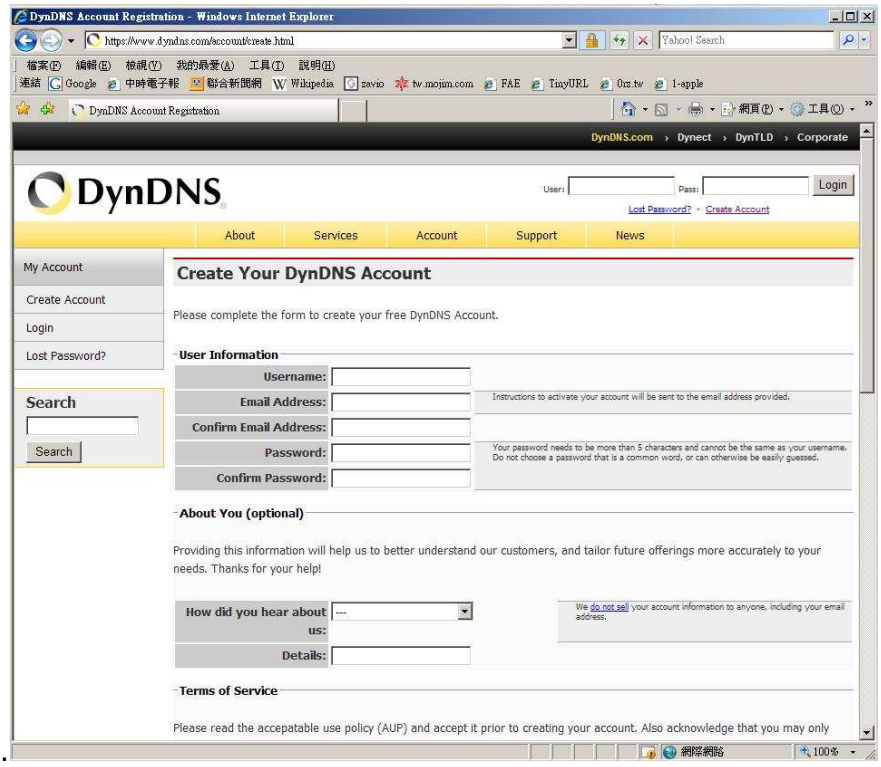
How to apply DDNS username and Host name??

You can apply DDNS username and Host name by the following steps:

1. Login http://www.dyndns.org, click the Create Account

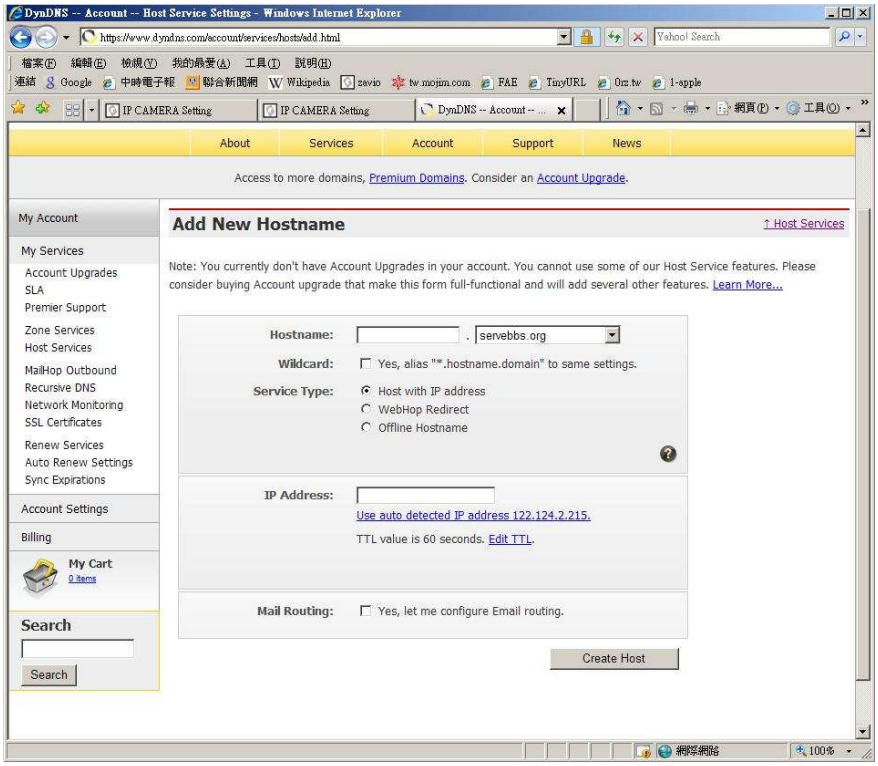


2. Input all information and follow step by step with DynDNS

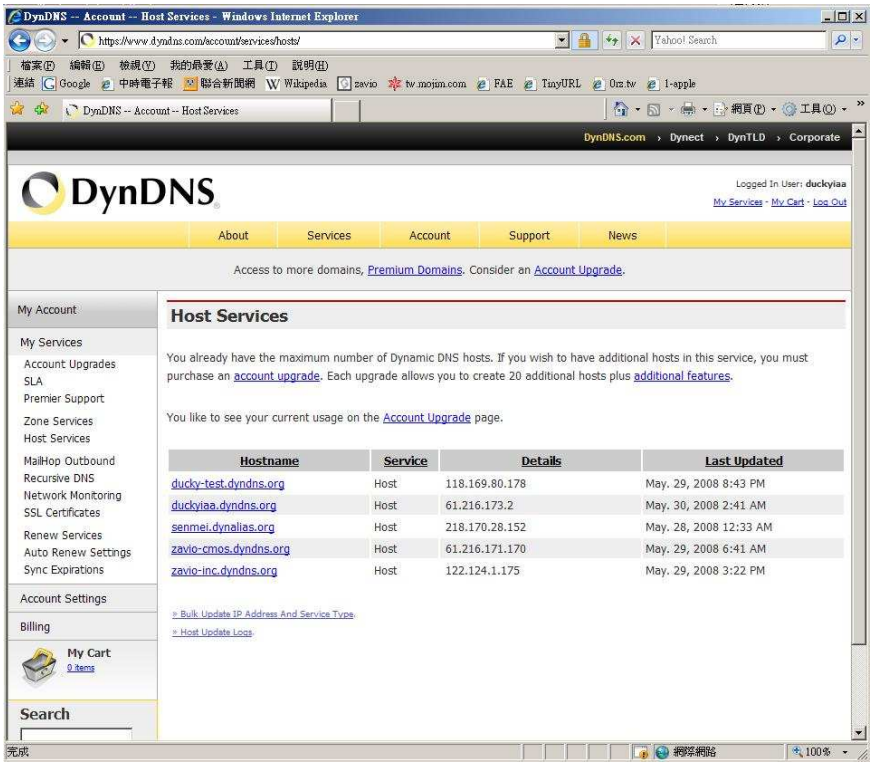


3. Login with new account and click Account → My Hosts → Add Host Services

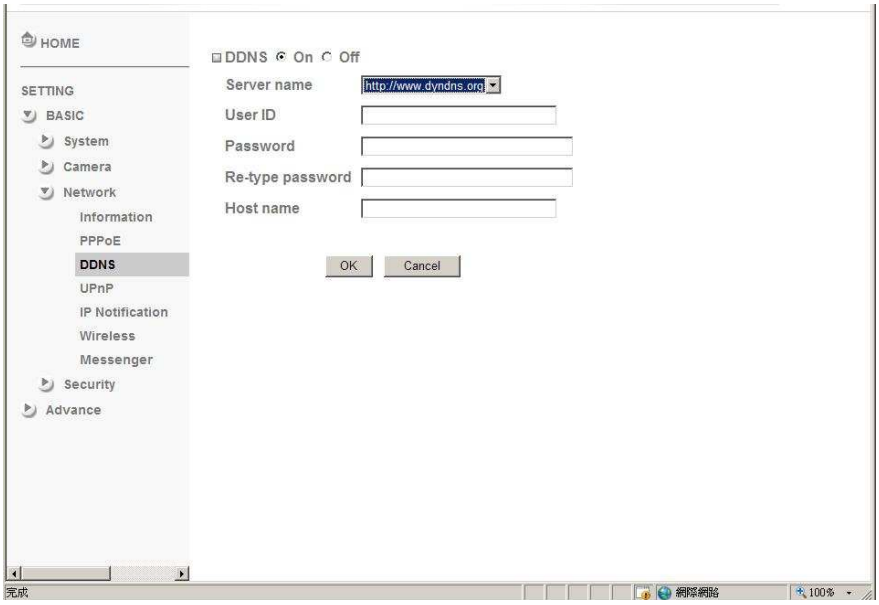
4. Type domain in the Hostname field and select sub-domain



5. After type information, check your DDNS service.

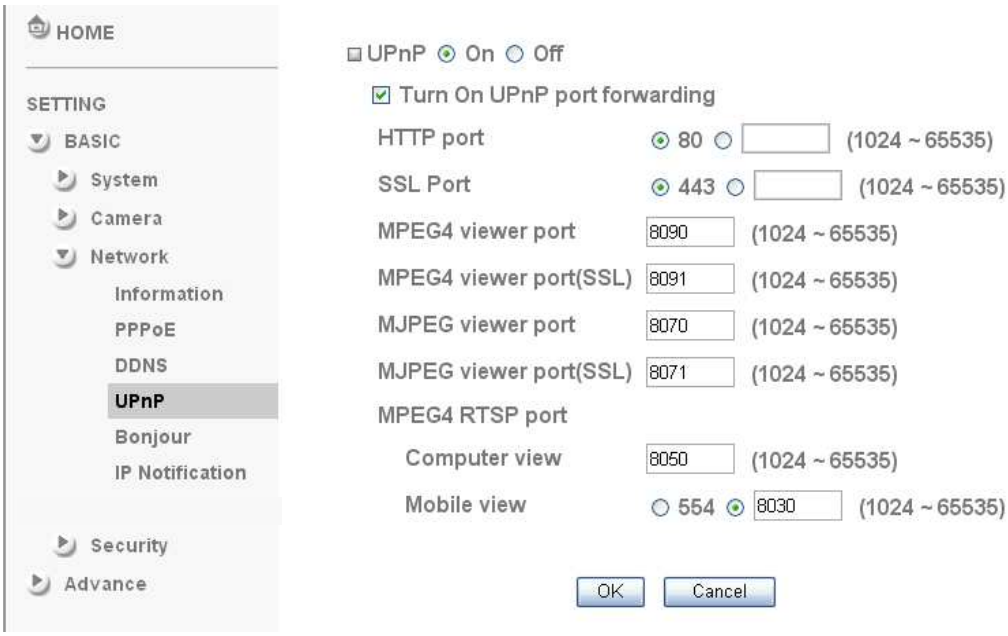


6. Type your DDNS User ID, Password and Host name in Setting → Network → DDNS. After completing setting, reboot IP Camera.



4.3.4 UPnP (Universal Plug and Play)

If you have a Router to access to internet and the Router supports UPnP IGD function, you need to turn on the UPnP Port Forwarding function.



➢ **HTTP port**: Enter the HTTP port number and default HTTP port is 80.

➢ **SSL port:** Enter the SSL port number and default SSL port is 443.

➢ **MPEG4 viewer port**: Enter the MPEG4 viewer port number and default MPEG4 viewer port is 8090.

➢ **MPEG4 viewer port (SSL)**: Enter the MPEG4 SSL viewer port and default is 8091.

➢ **MJPEG viewer port:** Enter the MJPEG viewer port number and default MJPEG viewer port is 8070.

➢ **MJPEG viewer port (SSL)**: Enter the MPEG4 SSL viewer port and default is 8071.

➢ **MPEG4 RTSP port:** Enter the MPEG4 RTSP port, default value is 8050 for computer view, 8030 for mobile view.

Note :

UPnP (Universal Plug and Play): UPnP is a set of computer network protocol. It allows devices to connect seamlessly and simplify the implementation of networks in the home and corporate environments. The device supports UPnP which is enabled by default. The device will be automatically detected and a new icon will be added to "My Network Place" if it also enables on your

computer. It provides Port Forwarding for opening a port in a router or firewall in a private network in order to let a party from the outside world contact a inside user.

4.3.5 Bonjour

Bonjour, also known as zero-configuration networking, enables automatic discovery of computers, devices, and services on IP networks. Bonjour uses industry standard IP protocols to allow devices to automatically discover each other without the need to enter IP addresses or configure DNS servers.

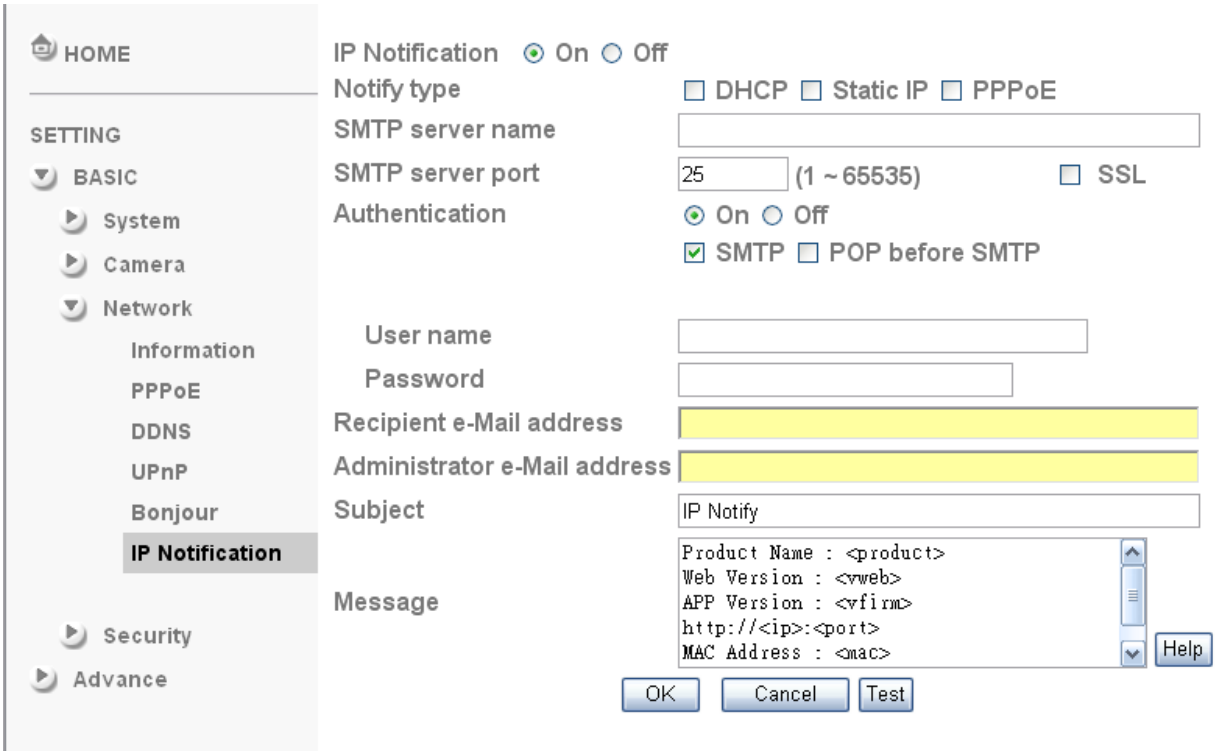
➢ **Device Name**: Enter Device Name you wish.

Note: How to use Bonjour in your Windows Browser UI? Please check the link below:

http://www.apple.com/support/downloads/bonjourforwindows.html

4.3.6 IP Notification

When network notify type is set to “ON”, you can send an e-mail notification of the completion of the network setting.



➢ **Notify Type**: You can select the notify type among DHCP, Static IP, and PPPoE.

➢ **SMTP Server Name**: Type the SMTP server name up to 64 characters, or the IP address of the SMTP server.

➢ **SMTP Server Port**: You can set port number from 1~65535 according to your mail server. The default value is 25.

●Security setting: Tick SSL box if the mail server you use has security restriction.

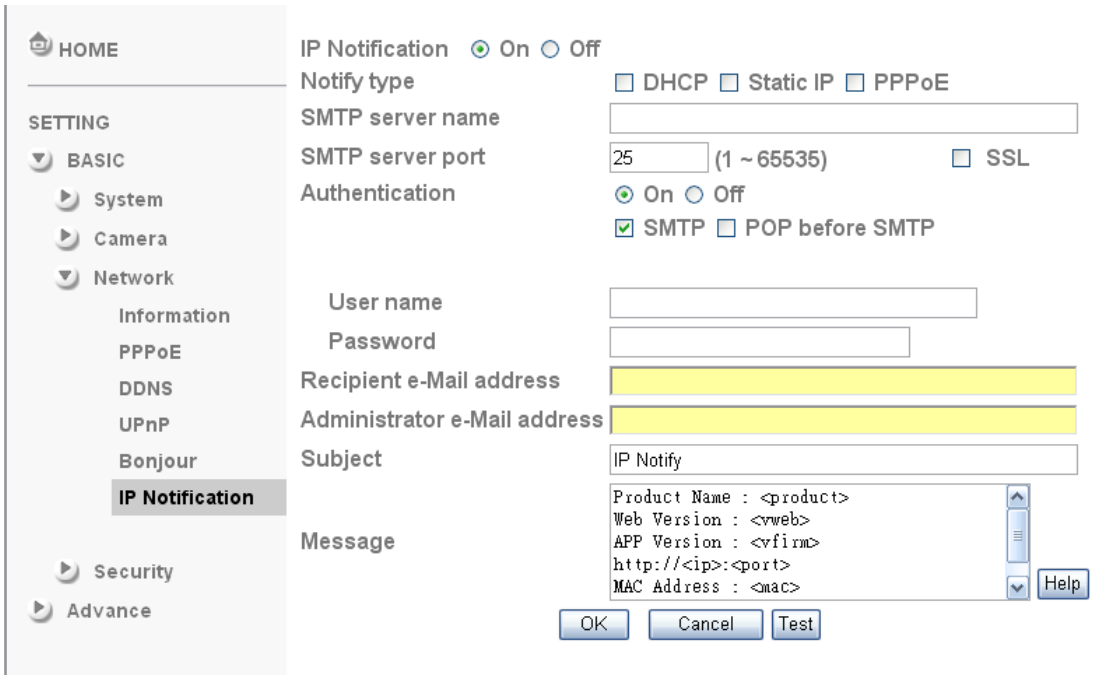
Note:

If you use g-mail as your mail server, you should set 587 as your port number and tick SSL box.

➢ **Authentication**: Select the authentication required when you send an email.

●Off: Select if no authentication is necessary when an email is sent.

●On: When authentication is necessary an e-mail is sent, there are **SMPT, POP before SMPT or both** three options.



➢ **Authentication**: Select the authentication required when you send an email.

- ●Off: Select if no authentication is necessary when an email is sent.
- ●On: When authentication is necessary an e-mail is sent, there are **SMPT, POP before SMPT or both** three options.

➢ **SMTP:** Select if SMTP authentication is necessary when an e-mail is sent.

➢ **POP before SMTP**: Select if POP before SMTP authentication is necessary when an e-mail is sent.

- ●**POP server name**: It is necessary when the **POP before SMTP** is selected in **Authentication**. Type the POP (receiving mail) server name up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server which sends e-mails performs authentication using the POP user account.
- ●**User name, Password**: Type the user name and Password of the user who has the mail account. This setting is necessary when the SMTP server which sends e-mails performs authentication.

➢ **Recipient e-mail address**: Type the recipient e-Mail address up to 64 characters. You can specify up to three recipient E-mail addresses.

➢ **Administrator e-mail address**: Type the Administrator e-Mail address up to 64 characters. This address is used for reply mail and sending system messages from the SMTP server.

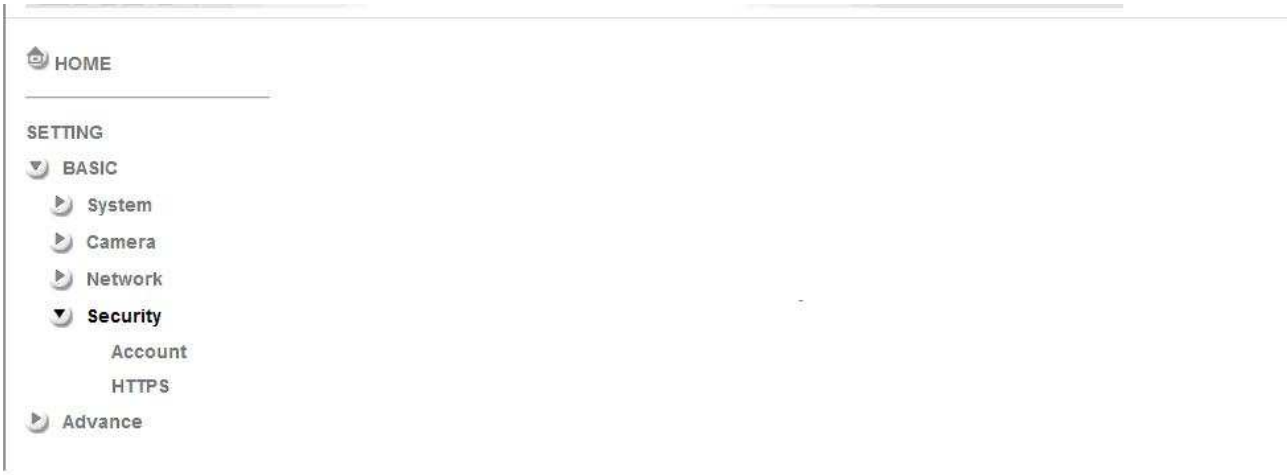
➢ **Subject**: Type the subject/title of the e-Mail up to 64 characters. With respect to mail which is sent according to the IP notification.

➢ **Message**: Type the text of the E-mail up to 384 characters. Default value provides

network information including IP, Port, MAC, Model, Firmware Version and Web Version.

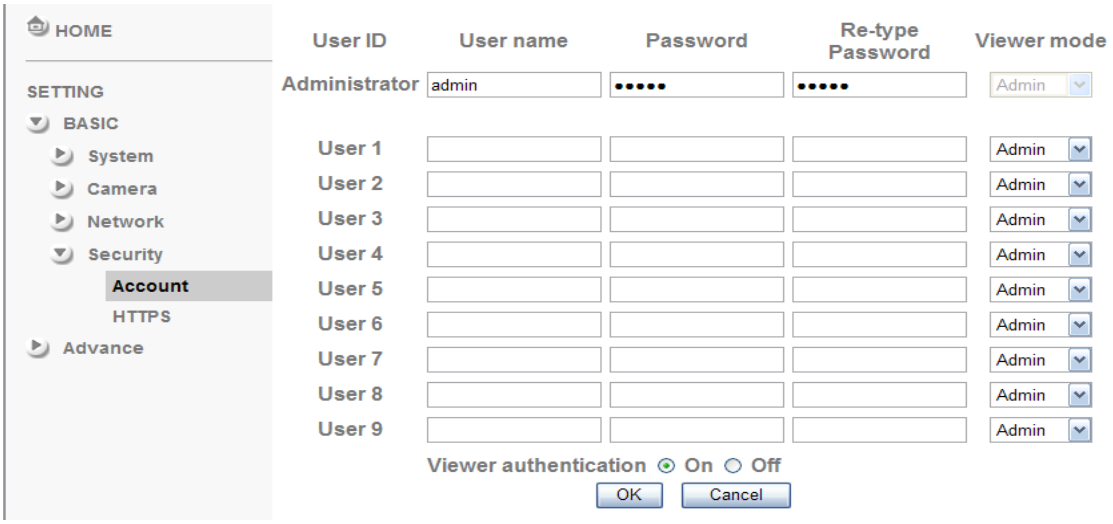
4.4 Security

Click the folder of **Security** to display the sub folders including **Account and HTTPS.**



4.4.1 Account

The device fault account and password setting is “admin / admin”. That means everyone who knows IP address can access the device including all configuration. It is necessary to assign a password if the device is intended to be accessed by others.



➢ **User name**: **S**et a user name between 4-16 characters.

➢ **Password**: Set a password between 4-16 characters.

➢ **Re-type Password**: Re-type the password to confirm.

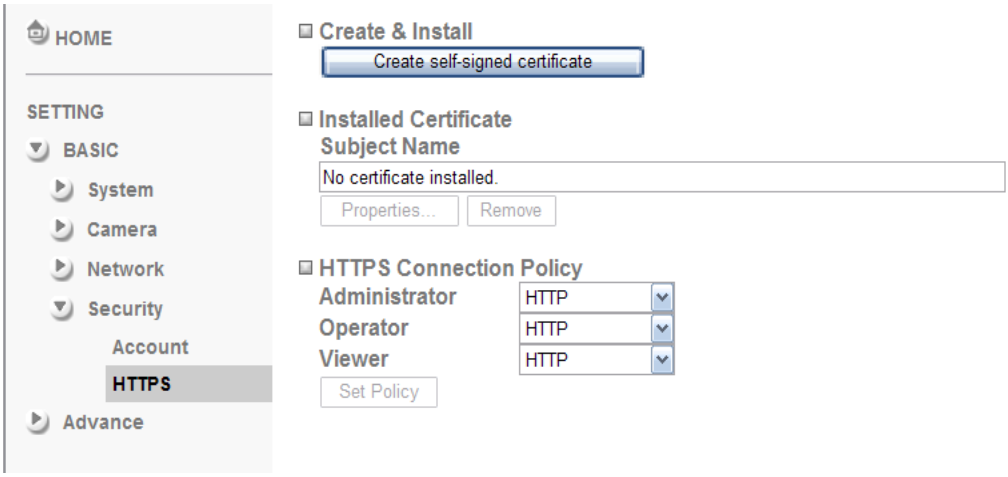
➢ **Viewer Mode**: Set the user mode among Admin, Operator, and Viewer. Different viewer mode has different limits of authority.

- ●The Admin mode has all authority of configuration.
- ●The Operator mode can not only view the Live View but also control the PTZ (apply in speed dome).
- ●The Viewer mode only can view the Live View.

➢ **Viewer Authentication**: Allows any viewer direct access to Live View.

4.4.2 HTTPS

HTTPS is a URI scheme used to indicate a secure HTTP connection. It is syntactically identical to the http:// scheme normally used for accessing resources using HTTP. Using an https: //URL/ with a different default TCP port (443) and an additional encryption / authentication layer between the HTTP and TCP. You can use the IP camera through HTTPS easily by using https:// instead of http://.

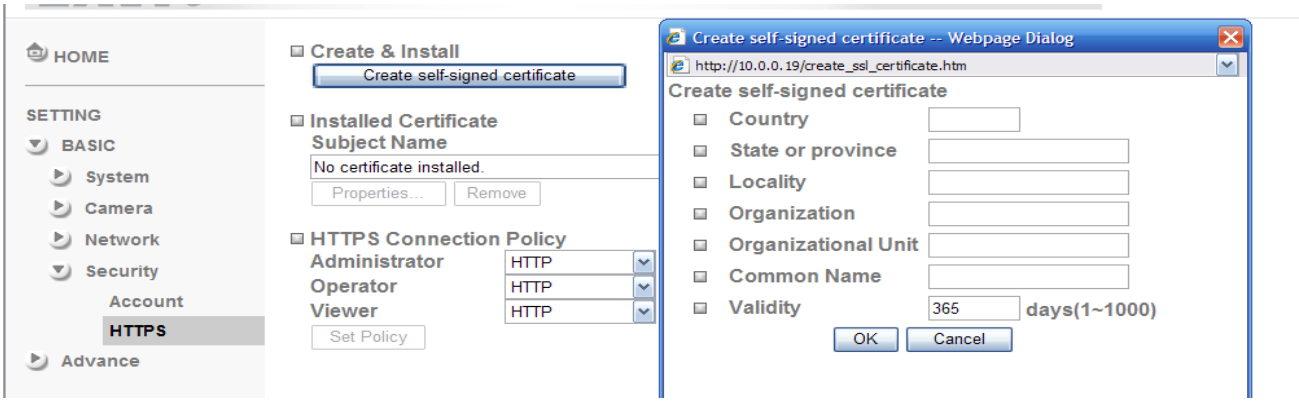


➢ **Create & Install**: Create a self-signed certificate for HTTPS to recognize.

➢ **Installed Certificate**: Display or remove the properties of the installed certificate.

➢ **HTTPS Connection Policy**: Set HTTPS connection policy for different level of users.

➢ To use the HTTPS encryption, please set up "**Create self-signed certificate**" for the first time you use the HTTPS function, and then set up the connection policy for different users.

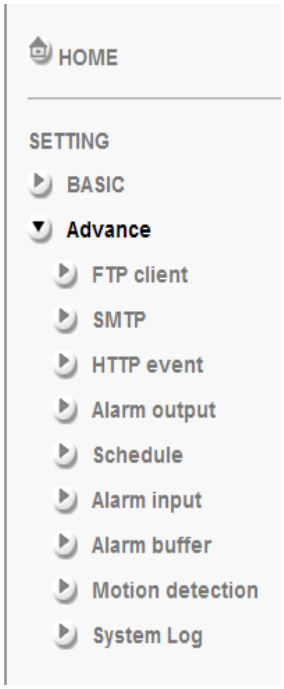


Note:

When enable HTTPS with RTSP on mode, the IP Camera only protect the setting such as username and password and do not protect video and audio. When enable HTTPS with RTSP off mode, the IP Camera will protect all setting including video and audio.

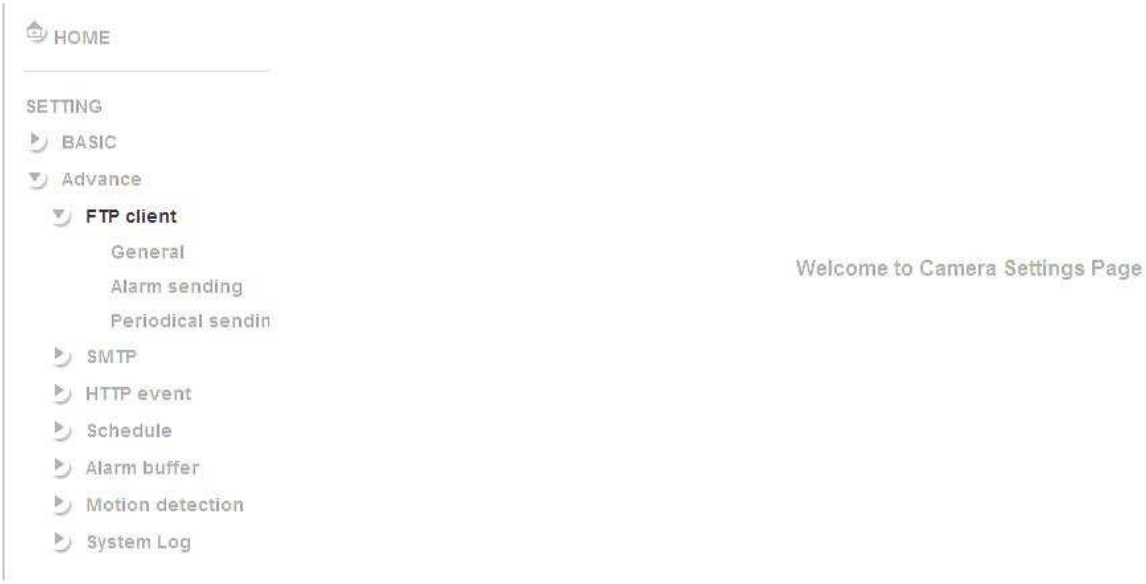
Chapter 5. Setting-Advance

Click the folder of **Advance** to display the sub folders including **FTP client, SMTP, HTTP event, Schedule, Alarm buffer, Motion detection and System Log.**



5.1 FTP Client

Use this menu to set up for capturing and sending images to an FTP server. By using FTP client function, you can send the **image and video file** which has been shot and recorded linked with the external sensor input or with the built-in motion detection function to FTP server. FTP client setting menu is composed of two tabs, **General**, **Alarm sending** and **Periodical sending**.

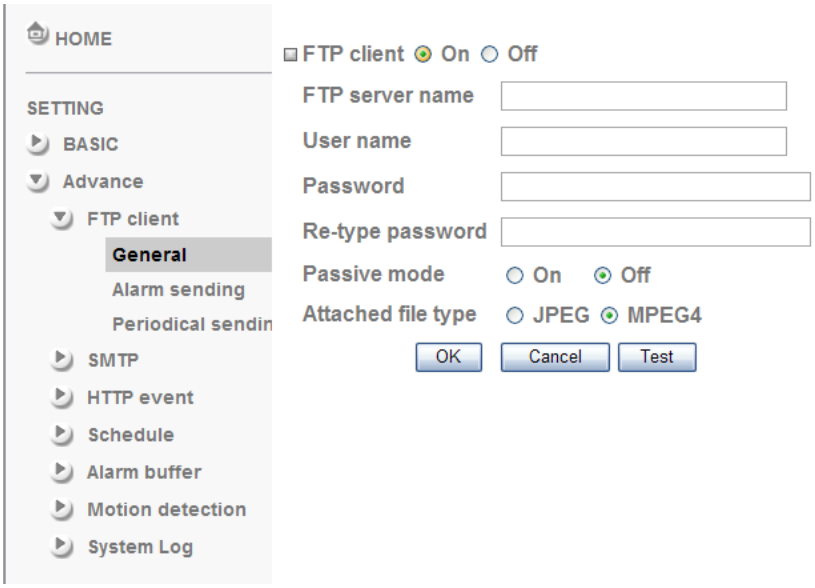


5.1.1 General

Select “**On”** when you use FTP function. The FTP client setting page appears. Select “**Off”,** when you do not wish to use the FTP client function.

Note:

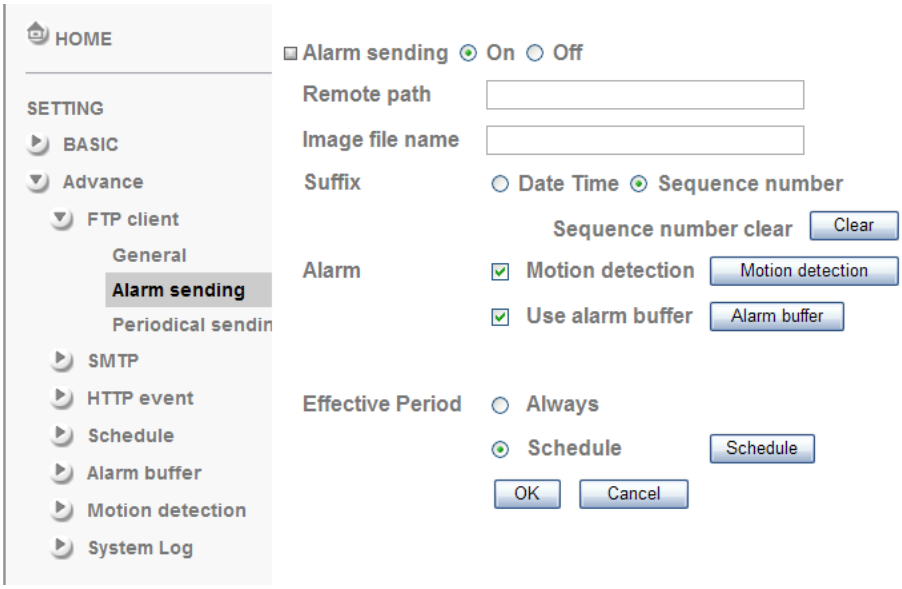
The frame rate and operability on the main viewer may decrease while a file is being transmitted by the FTP client function.



- **FTP server name**: Type the FTP server name to upload still images up to 64 characters, or the IP address of the FTP server.
- **User name**: Type the user name for the FTP server.
- **Password**: Type the password for the FTP server.
- **Retype password**: To confirm the password, type the same characters as you typed in the Password box.
- **Passive mode**: Set whether you use the passive mode of FTP server or not when connecting to FTP server. Select **On** to connect to FTP server using the passive mode.
- **Attached file type**: You can choose the attached file in **JPEG** or **MPEG4** type.

5.1.2 Alarm sending

Set to forward th**e image and video file** to the specified FTP server linked with the alarm detection by the external sensor input or by the built-in motion detection function. Select **On** to send the image file to FTP server linked with the alarm detection.



➢ **Remote Path**: Type the path to the destination in FTP server up to 64 characters.

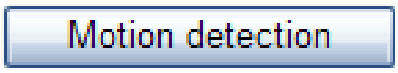
➢ **Image File Name**: Type the file name you want to assign to the images when sending to the FTP server. You can use up to 10 alphanumeric characters, - (hyphen) and _ (underscore) for naming.

➢ **Suffix**: Select a suffix to add to the file name

- **Date & time**: The date & time suffix is added to the Image file name. The date/time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name.
- **Sequence number**: A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 is added to the Image file name.
- **Sequence number clear**: Click **Clear** and the suffix of the sequence number returns to 1.

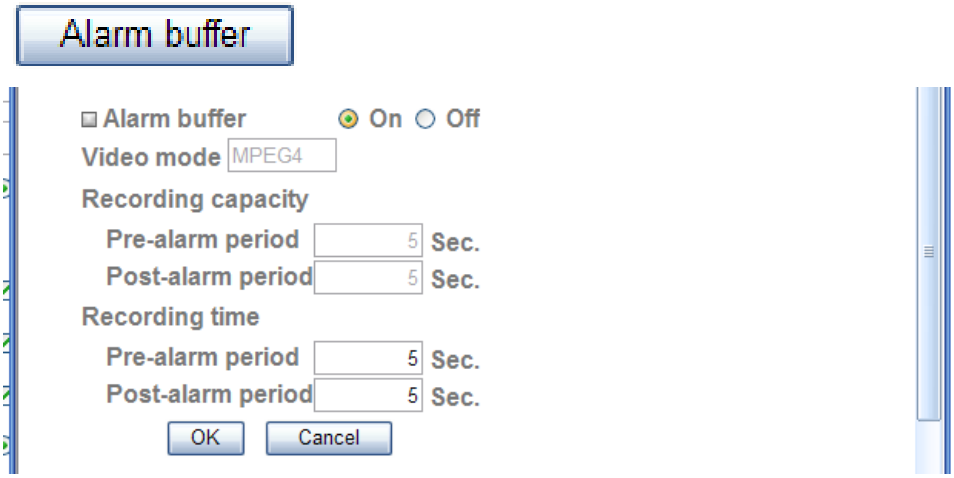
➢ **Alarm**

●**Motion Detection**: Click it on for using **Motion Detection** function as a sensor. You can set motion detection function at the motion detection function page.



Note: You can set motion detection at motion detection page. **(Please go "Setting → Advance →Motion detection → Setting") For more details, you can check Chapter 6.6.**

●**Use Alarm Buffer**：Select **Use alarm buffer** when you forward the image and video of before and after the alarm detection (pre-alarm, post-alarm). If you do not select it, only the image of the moment of the alarm detection is forwarded. Click **Alarm buffer** to display the Alarm buffer setting menu.



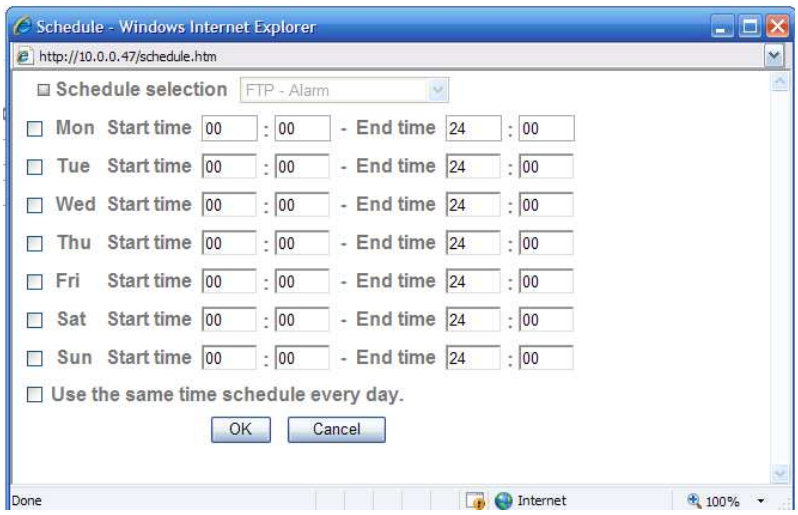
Note: You can set the alarm buffer function at alarm buffer page. **(Please go "Setting→ Advance → Alarm buffer → Setting"). For more details, you can check Chapter 6.5.**

➢ **Effective period**: Set the period when the periodical sending is effective.

●**Always**: The periodical sending is always effective.

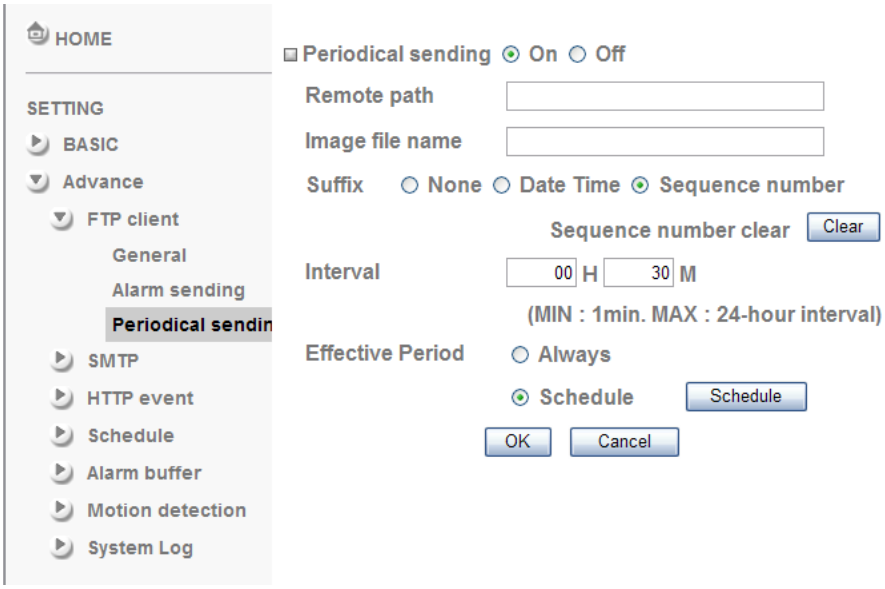
●**Schedule**: You can specify the period when the periodical sending is effective in the Schedule setting in the other section.

Note: You can set schedule function at schedule page. **(Please go "Setting → Advance → Schedule → Setting") For more details, you can check Chapter 6.4.**


Schedule - Windows Internet Explorer
http://10.0.0.47/schedule.htm
Schedule selection
FTP - Alarm
Mon Start time 00 : 00 - End time 24 : 00
Tue Start time 00 : 00 - End time 24 : 00
Wed Start time 00 : 00 - End time 24 : 00
Thu Start time 00 : 00 - End time 24 : 00
Fri Start time 00 : 00 - End time 24 : 00
Sat Start time 00 : 00 - End time 24 : 00
Sun Start time 00 : 00 - End time 24 : 00
Use the same time schedule every day.
OK
Cancel
Done
Internet
100%

5.1.3 Periodical sending

You can set to send an image file to FTP server periodically by selecting **On** to send the image file to FTP server linked with setting period.



➢ **Image file name**: Type the file name of the image sent by SMTP up to 10 alphanumeric characters, - (hyphen) and _ (under score).

➢ **Suffix**: Select a suffix to be added to the file name sent by SMTP.

- ●**None**: The name of the sent file will be the Image file name.
- ●**Date & time**: The date & time suffix is added to the Image file name. The date & time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits) and second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name.
- ●**Sequence number**: A **consecutive** number is added to the Image file name.
- ●**Sequence number clear**: Click **Clear** and the suffix of the sequence number returns to 1.

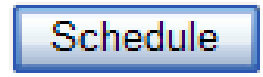
➢ **Interval**: Set the periodical sending is effective interval. Min value is 1 min and Max value is 24 hour.

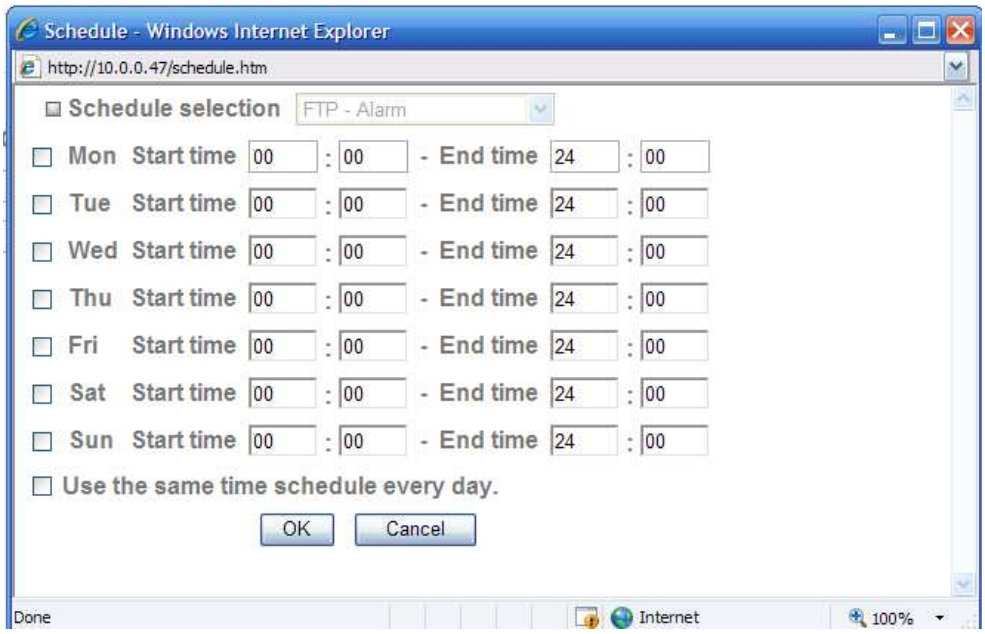
➢ **Effective period**: Set the period when the periodical sending is effective.

●**Always**: The periodical sending is always effective.

●**Schedule**: You can specify the period when the periodical sending is effective in the Schedule setting in the other section.

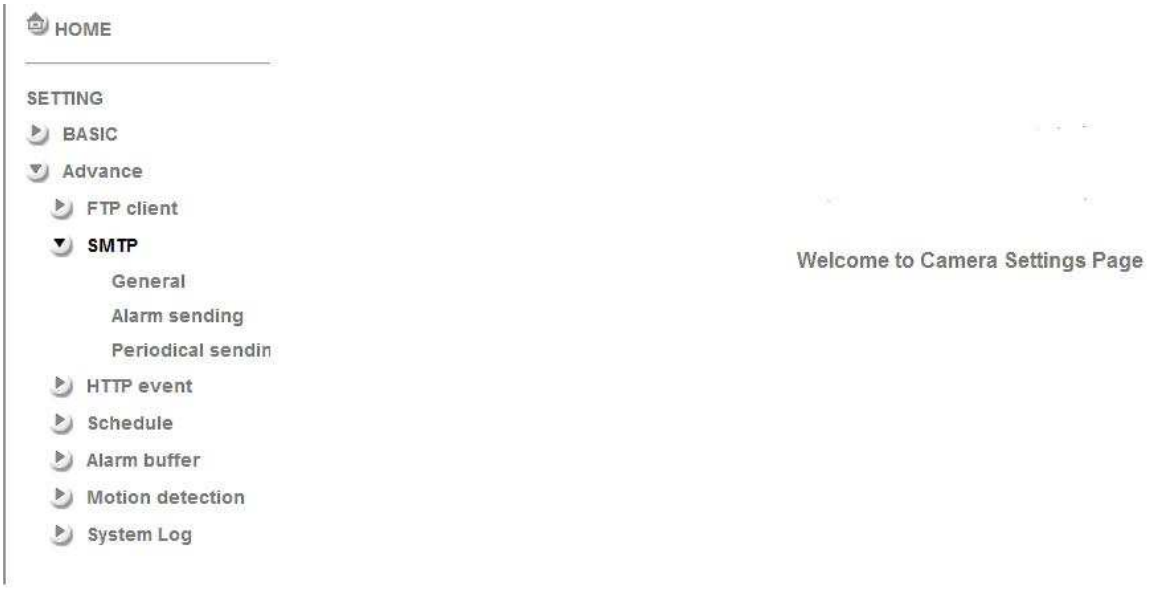
Note: You can set schedule function at schedule page. **(Please go "Setting → Advance → Schedule → Setting") For more details, you can check Chapter 6.4.**





5.2 SMTP

Set the SMTP menu when you want to send an image via e-mail. By using Mail (SMTP) function, you can send a mail with attached **image and video** which has been shot linked with the external sensor input or with the built-in motion detection function. The image file can also be sent periodically. E-Mail (SMTP) setting menu is composed of three tabs, **General**, **Alarm sending** and **Periodical sending**.

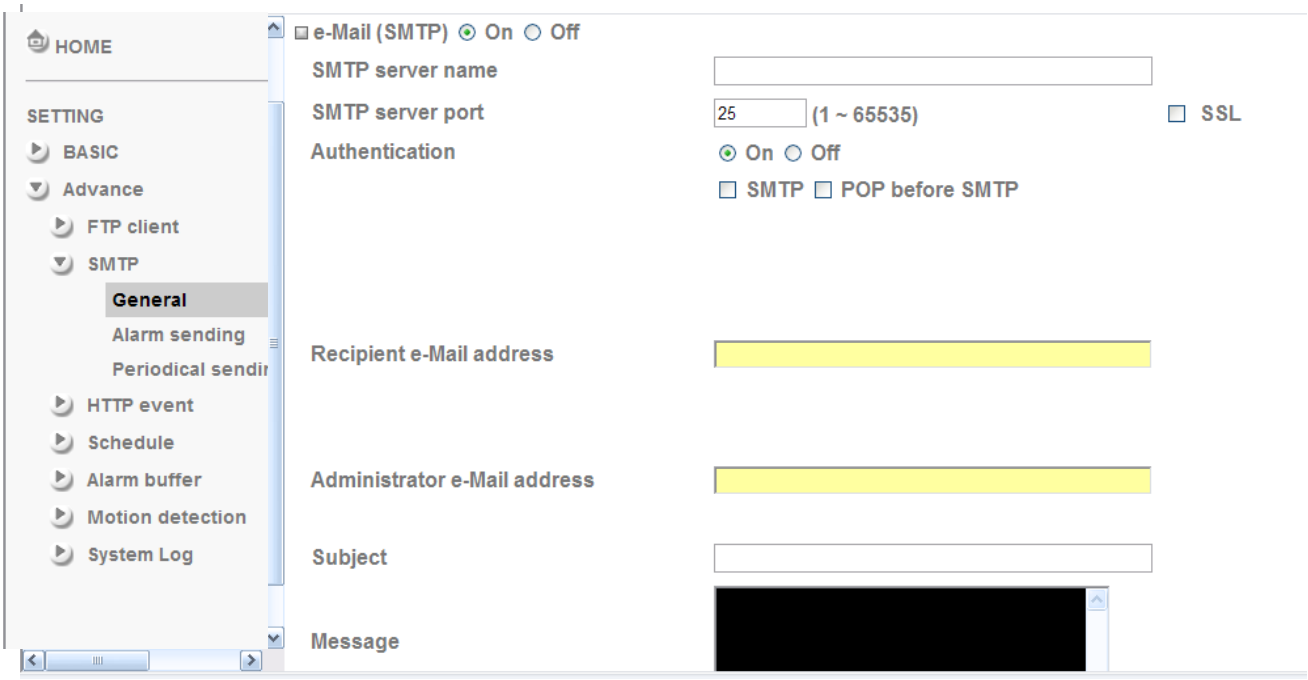


5.2.1 General

Select **On** when you use the SMTP function. The common setting options are displayed below. Select **Off,** if you do not wish to use the e-Mail (SMTP) function.

Note :

The Setting of general part will be the same as the setting of IP Notification (Please check "Setting → Basic → Network → IP Notification")



➢ **SMTP server name**: Type the SMTP server name up to 64 characters, or the IP address of the SMTP server.

➢ **SMTP Server Port**: You can set port number from 1~65535 according to your mail server. The default value is 25.

●**Security setting**: Tick SSL box if the mail server you use has security restriction.

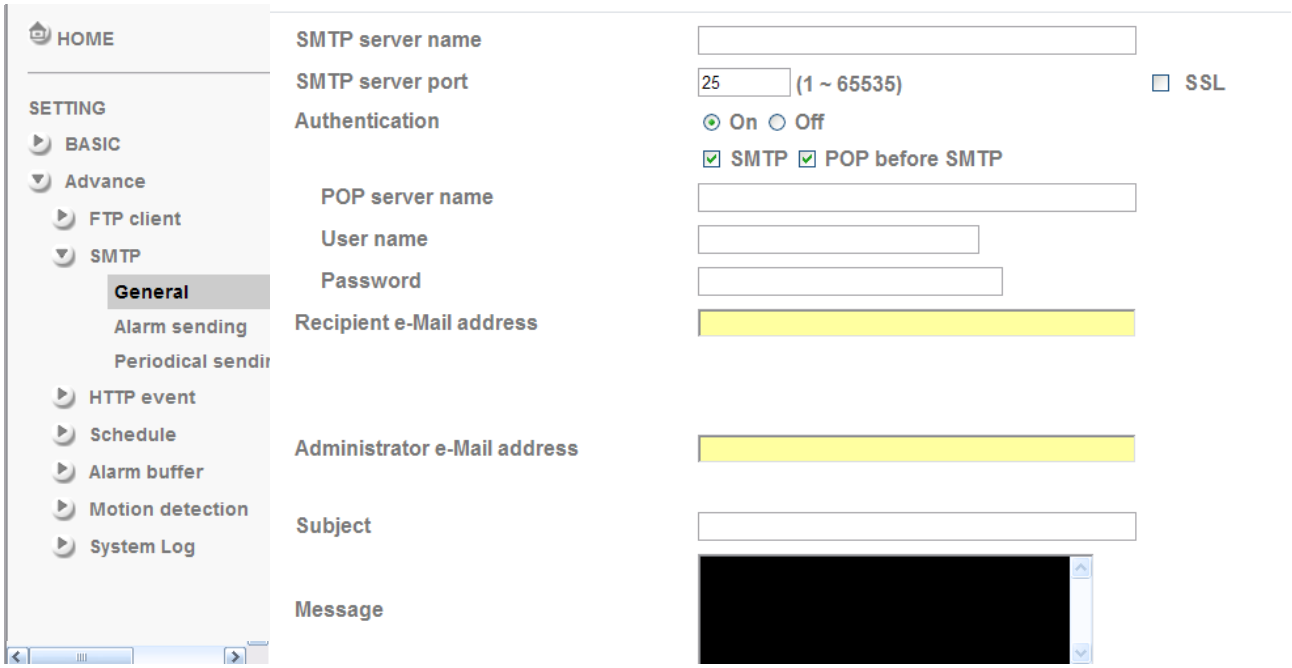
Note:

If you use g-mail as your mail server, you should set 587 as your port number and tick SSL box.

➢ **Authentication**: Select the authentication required when you send an email.

●Off: Select if no authentication is necessary when an email is sent.

●On: When authentication is necessary an e-mail is sent, select one of the authentication methods from the followings.



➢ **Authentication**: Select the authentication required when you send an email.

●Off: Select if no authentication is necessary when an email is sent.

●On: When authentication is necessary an e-mail is sent, select one of the authentication methods from the followings.

➢ **SMTP**: Select if SMTP authentication is necessary when an e-mail is sent.

➢ **POP before SMTP**: Select if POP before SMTP authentication is necessary when an e-mail is sent.

Note：**When you set to On, be sure to select either or both SMTP or / and POP before SMTP.**

●**POP server name**: It is necessary when the **POP before SMTP** is selected in **Authentication**. Type the POP (receiving mail) server name up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server which sends e-mails performs authentication using the POP user account.

●**User name, Password**: Type the user name and Password of the user who has the mail account. This setting is necessary when the SMTP server which sends e-mails performs authentication.

➢ **Recipient e-mail address**: Type the recipient e-Mail address up to 64 characters. You can specify up to three recipient E-mail addresses.

➢ **Administrator e-mail address**: Type the Administrator e-Mail address up to 64 characters. This address is used for reply mail and sending system messages from the SMTP server.

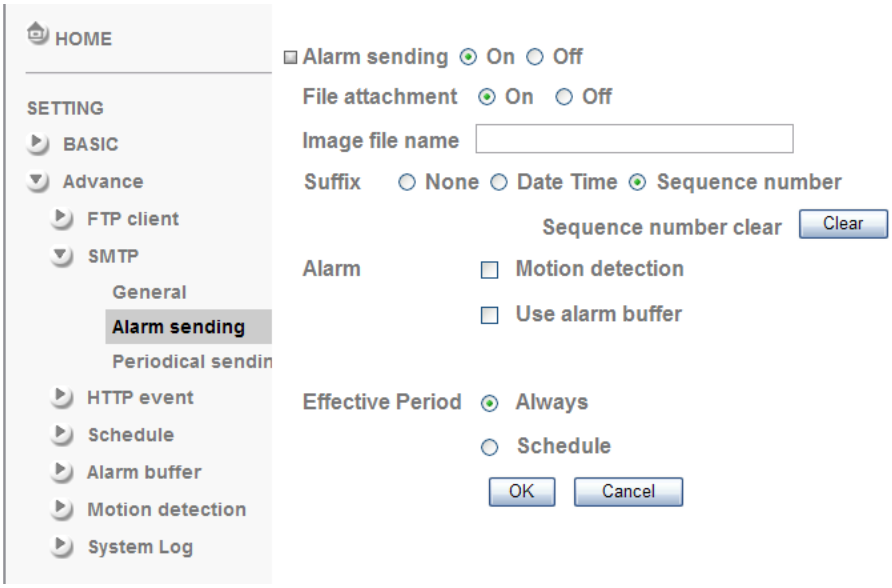
➢ **Subject**: Type the subject/title of the e-Mail up to 64 characters. With respect to

mail which is sent according to the alarm detection when **Alarm sending** of the alarm tab is set to **On**, the characters standing for the sensor type added to the subject.

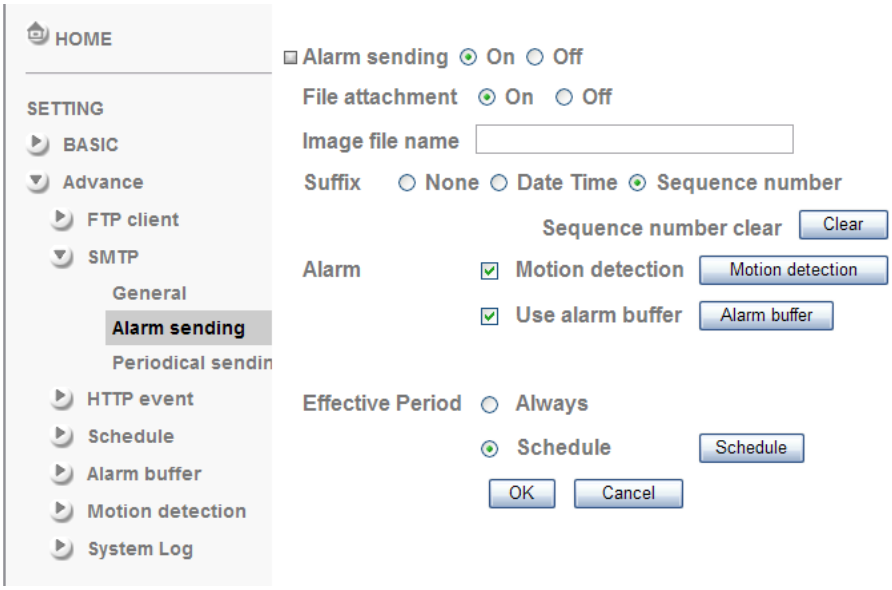
- **Message**: Type the text of the E-mail up to 384 characters. (A line break is equivalent to 2 characters.)

5.2.2 Alarm sending

Set to send the mail with connection to the alarm detection by the external sensor input or by the built-in motion detection function. Select On to send the image and file to SMTP server linked with the alarm detection.

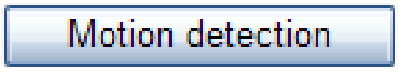


- **Alarm sending**: Select **On** to set to send mail with connection to the alarm detection.
- **File attachment**: Set whether an image file is attached to the mail sent or not. When **On** is selected, the image file made by the settings below is attached. When **Off** is selected, only the message is sent.
- **Image file name**: Type the file name you want to assign to the image to attach a mail. You can use up to 10 alphanumeric, - (hyphen) and _ (underscore) for naming.
- **Suffix**: Select a suffix to add to the file name
  - **Date & time**: The date & time suffix is added to the Image file name. The date/time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits), second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name.
  - **Sequence number**: A consecutive number of 10 digits between 0000000001 and 4294967295 and two fixed digits 00 is added to the Image file name.
  - **Sequence number clear**: Click **Clear** and the suffix of the sequence number returns to 1.



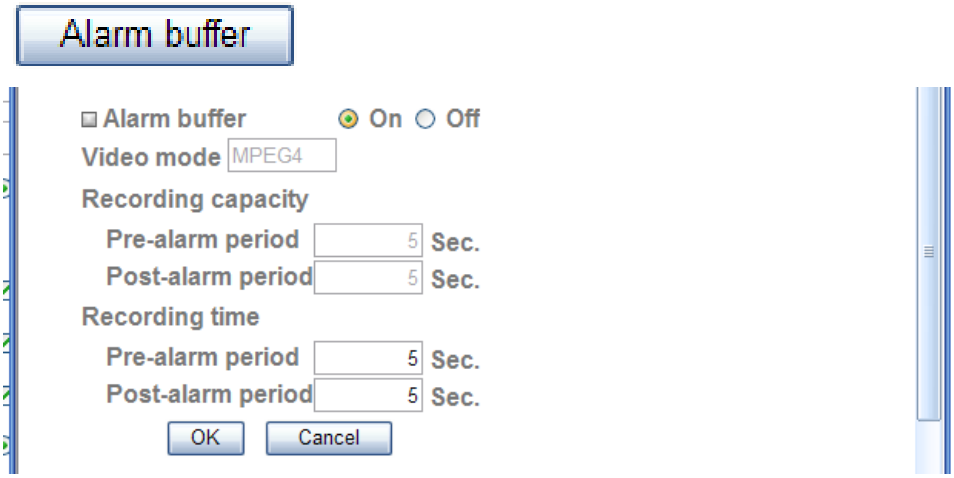
➢ **Alarm**

●**Motion Detection**: Click it on for using **Motion Detection** function as a sensor. You can set motion detection function at the motion detection function page.



Note: You can set motion detection at motion detection page. **(Please go "Setting → Advance → Motion detection → Setting") For more details, you can check Chapter 6.6.**

●**Use Alarm Buffer**：Select **Use alarm buffer** when you forward the image and video of before and after the alarm detection (pre-alarm, post-alarm). If you do not select it, only the image of the moment of the alarm detection is forwarded. Click **Alarm buffer** to display the Alarm buffer setting menu.



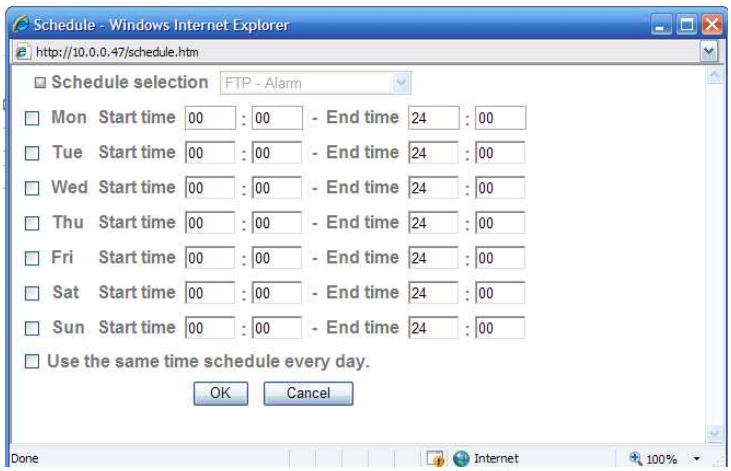
Note: You can set the alarm buffer function at alarm buffer page. **(Please go "Setting→ Advance → Alarm buffer → Setting"). For more details, you can check Chapter 6.5.**

➢ **Effective period**: Set the period when the periodical sending is effective.

●**Always**: The periodical sending is always effective.

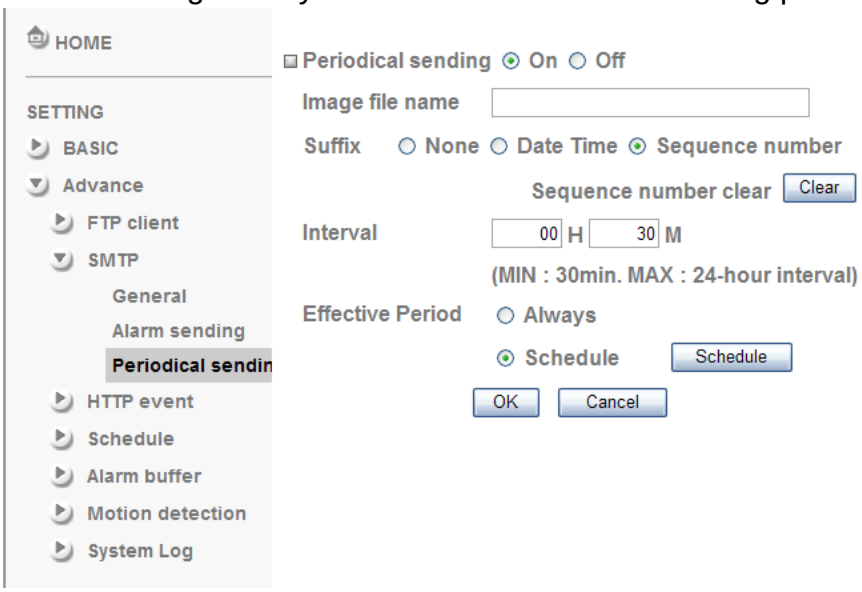
●**Schedule**: You can specify the period when the periodical sending is effective in the Schedule setting in the other section.

Note: You can set schedule function at schedule page. **(Please go "Setting → Advance → Schedule → Setting") For more details, you can check Chapter 6.4.**


Schedule - Windows Internet Explorer
http://10.0.0.47/schedule.htm
Schedule selection
FTP - Alarm
Mon Start time 00 : 00 - End time 24 : 00
Tue Start time 00 : 00 - End time 24 : 00
Wed Start time 00 : 00 - End time 24 : 00
Thu Start time 00 : 00 - End time 24 : 00
Fri Start time 00 : 00 - End time 24 : 00
Sat Start time 00 : 00 - End time 24 : 00
Sun Start time 00 : 00 - End time 24 : 00
Use the same time schedule every day.
OK
Cancel
Done
Internet
100%

5.2.3 Periodical sending

You can set to send an image file by SMTP server periodically by selecting **On** to send the image file by SMTP server linked with setting period.



➢ **Image file name**: Type the file name of the image sent by SMTP up to 10 alphanumeric characters, - (hyphen) and _ (under score).

➢ **Suffix**: Select a suffix to be added to the file name sent by SMTP.

- **None**: The name of the sent file will be the Image file name.
- **Date & time**: The date & time suffix is added to the Image file name. The date & time suffix consists of lower two-digits of year (2 digits), month (2 digits), date (2 digits), hour (2 digits), minute (2 digits) and second (2 digits), and consecutive number (2 digits), thus 14-digit number is added to the file name.
- **Sequence number**: A consecutive number is added to the Image file name.
- **Sequence number clear**: Click **Clear** and the suffix of the sequence number returns to 1.

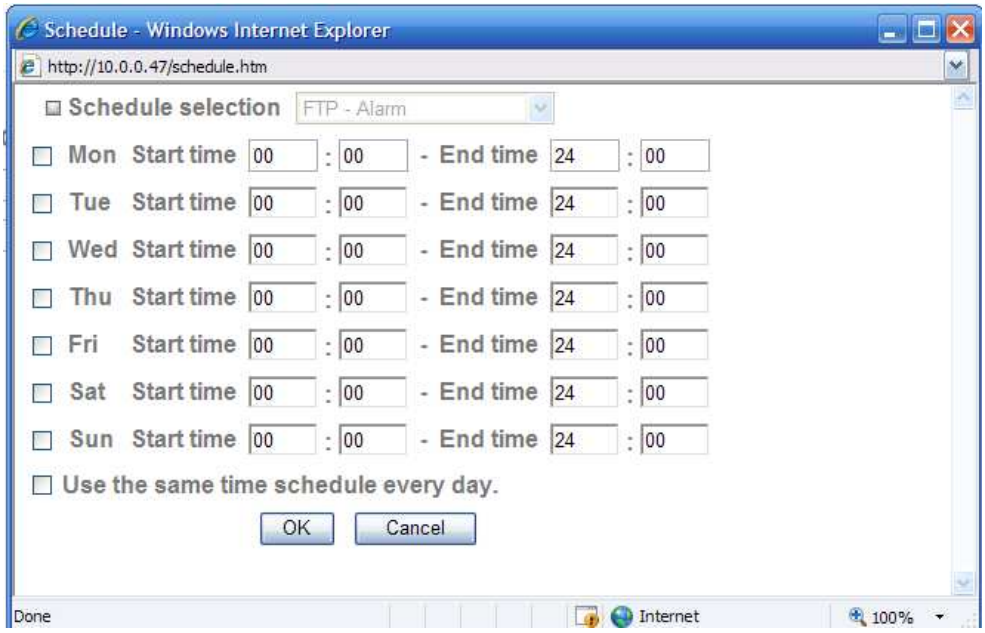
➢ **Interval**: Set the periodical sending is effective interval. Min value is 30 min and Max value is 24 hour.

➢ **Effective period**: Set the period when the periodical sending is effective.

●**Always**: The periodical sending is always effective.

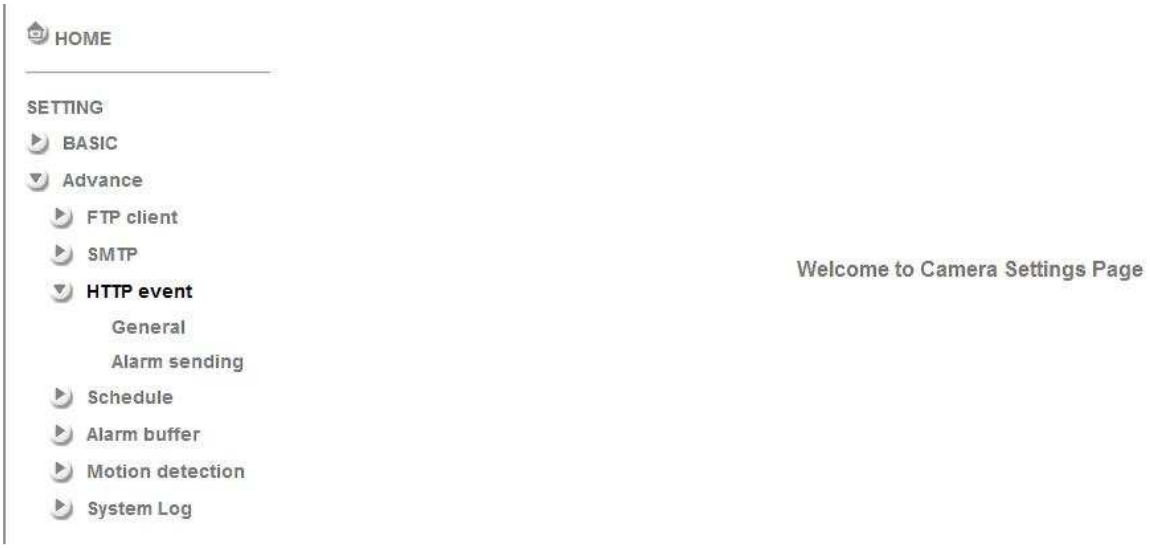
●**Schedule**: You can specify the period when the periodical sending is effective in the schedule setting in the other section. **Please check "Setting → Basic → Advance → Schedule → Setting."**

Note: You can set schedule function at schedule page. **(Please go "Setting → Advance → Schedule → Setting") For more details, you can check Chapter 6.4.**

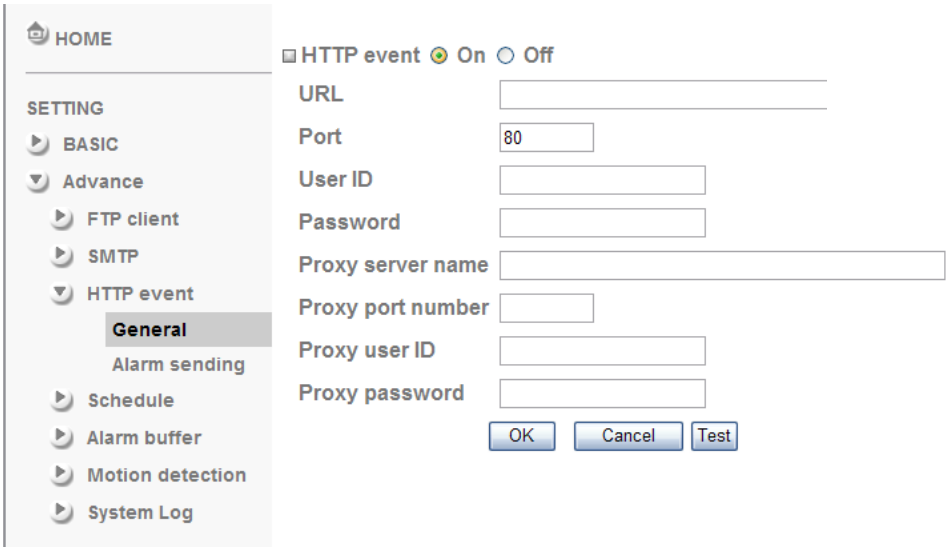


5.3 HTTP event

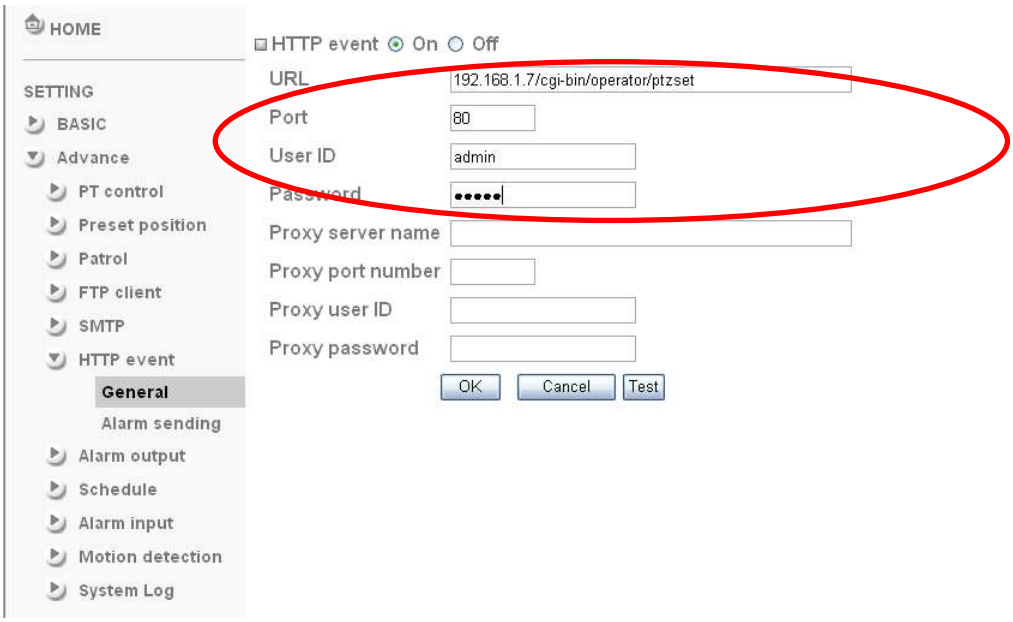
Use this menu to set up for capturing and sending images to an HTTP server. By using HTTP client function, you can send the image file and audio file which has been shot and recorded linked with the external sensor input or with the built-in motion detection function to HTTP server. HTTP client setting menu is composed of two tabs, **General** and **Alarm sending.**



5.3.1 General



➢ **HTTP event**: Set up the HTTP server URL, port, User ID, Password, and Proxy Server settings.



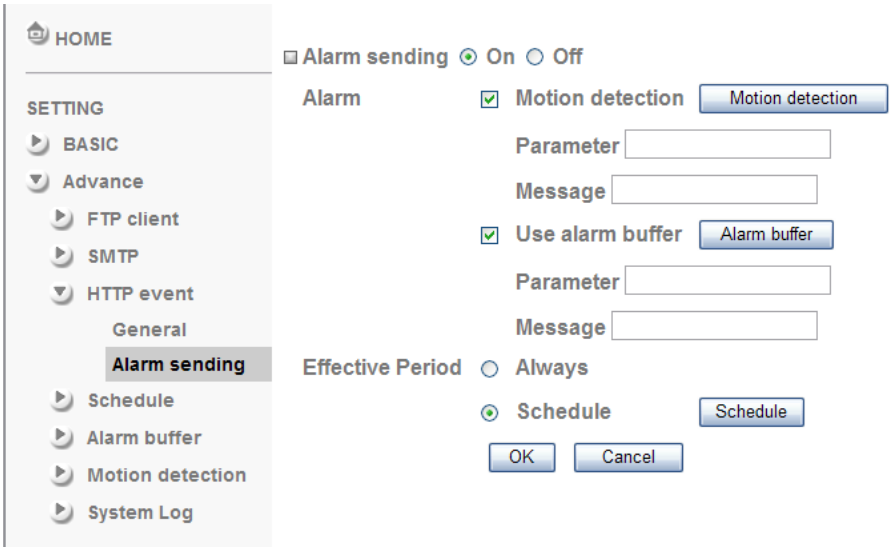
For example:

URL: 192.168.1.7/cgi-bin/operator/ptzset

Note: The setting of URL should be the same as CGI

5.3.2 Alarm sending

Set to send the mail with connection to the alarm detection by the external sensor input or by the built-in motion detection function. Select **On** to send the image and audio file to HTTP server linked with the alarm detection.



Alarm sending: Select **On** to set to send mail with connection to the alarm detection.

➢ **Alarm**

●**Motion detection**、**Use alarm buffer**

➢ **Effective period**: Set the period when the periodical sending is effective.

●**Always**: The periodical sending is always effective.

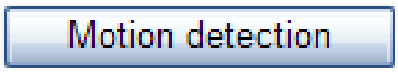
●**Schedule**: You can specify the period when the periodical sending is effective in the schedule setting in the other section.

Note:

You can set schedule function at schedule page. (Please go "Setting → Advance → Schedule → Setting") For more details, you can check Chapter 6.4.

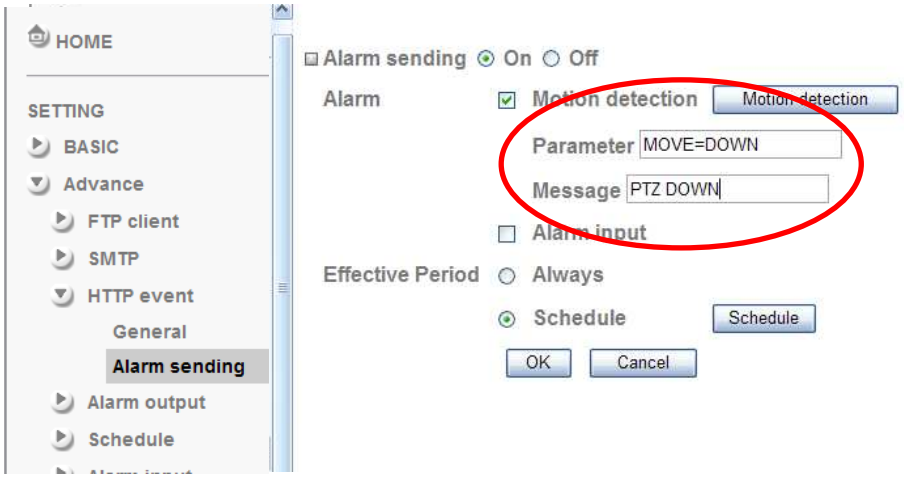
➢ **Alarm**

●**Motion Detection**: Click it on for using **Motion Detection** function as a sensor. You can set motion detection function at the motion detection function page.



Note: You can set motion detection at motion detection page. (Please go "Setting → Advance → Motion detection → Setting") For more details, you can check Chapter 6.6.

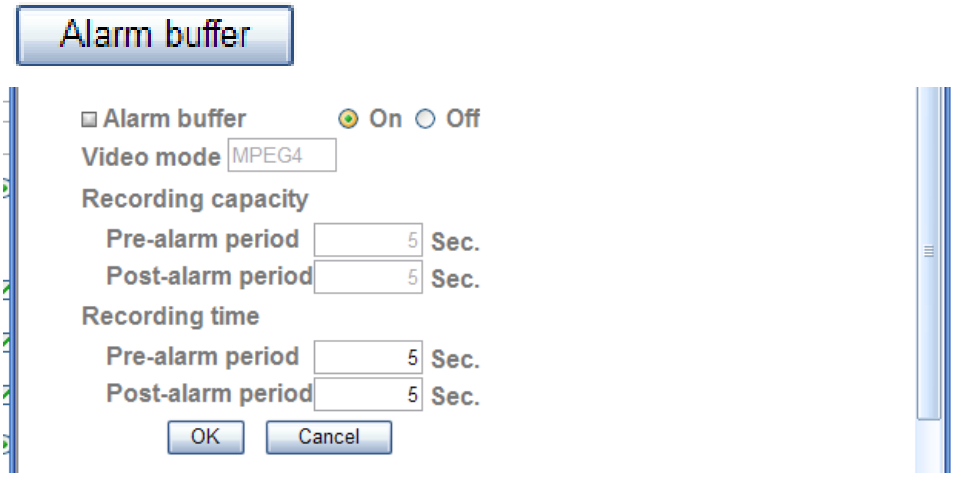
Note： Motion Detection works only when the MPEG4 function is On.



- ✓ **Parameter:** the parameter of CGI (defined in URL of HTTP → General) is from your target device. For example, move=down.
- ✓ **Message:** message will show up in the form of Message = PTZ down. If your target device didn't support the parameter of message, you can't see the message. So you can just take the message as a note.

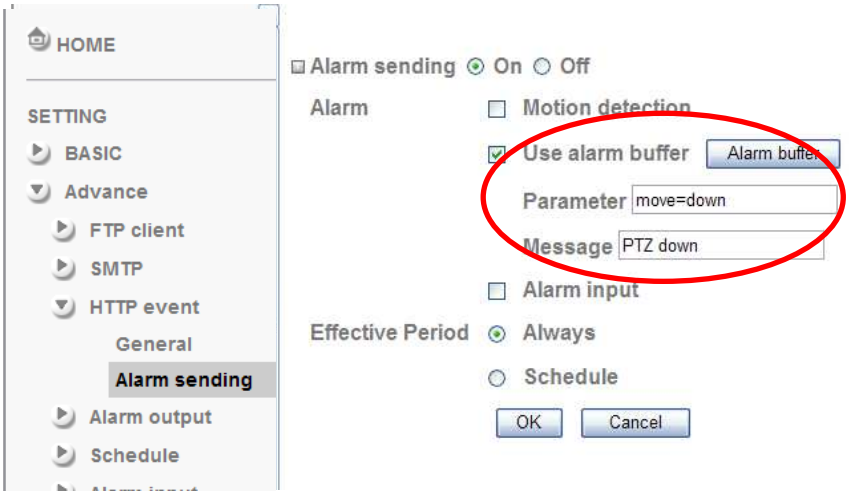
For example: PTZ down.

●**Use Alarm Buffer**: Select **Use alarm buffer** when you forward the image / audio of before and after the alarm detection (pre-alarm, post-alarm). If you do not select it, only the image of the moment of the alarm detection is forwarded. Click **Alarm buffer** to display the Alarm buffer setting menu.



Note:

You can set the alarm buffer function at alarm buffer page. (Please go "Setting → Advance → Alarm buffer → Setting") For more details, you can check Chapter 6.5.



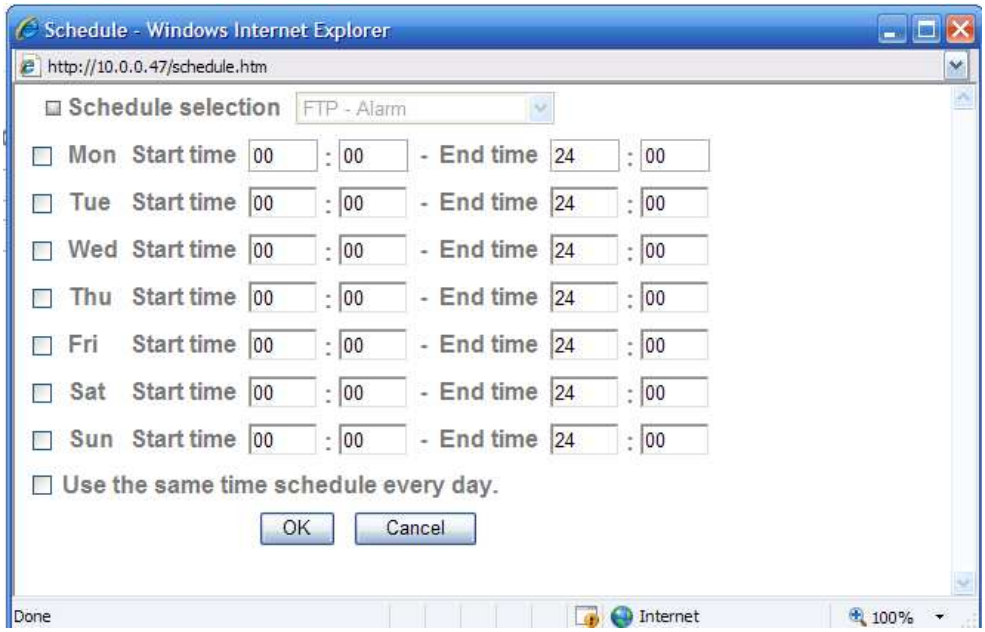
- ✓ **Parameter:** the parameter of CGI (defined in URL of HTTP→General) is from your target device. For example, move=down.
- ✓ **Message:** message will show up in the form of Message = PTZ down. If your target device didn't support the parameter of message, you can't see the message. So you can just take the message as a note. For example: PTZ down.

➢ **Effective period**: Set the period when the periodical sending is effective.

●**Always**: The periodical sending is always effective.

●**Schedule**: You can specify the period when the periodical sending is effective in the Schedule setting in the other section.

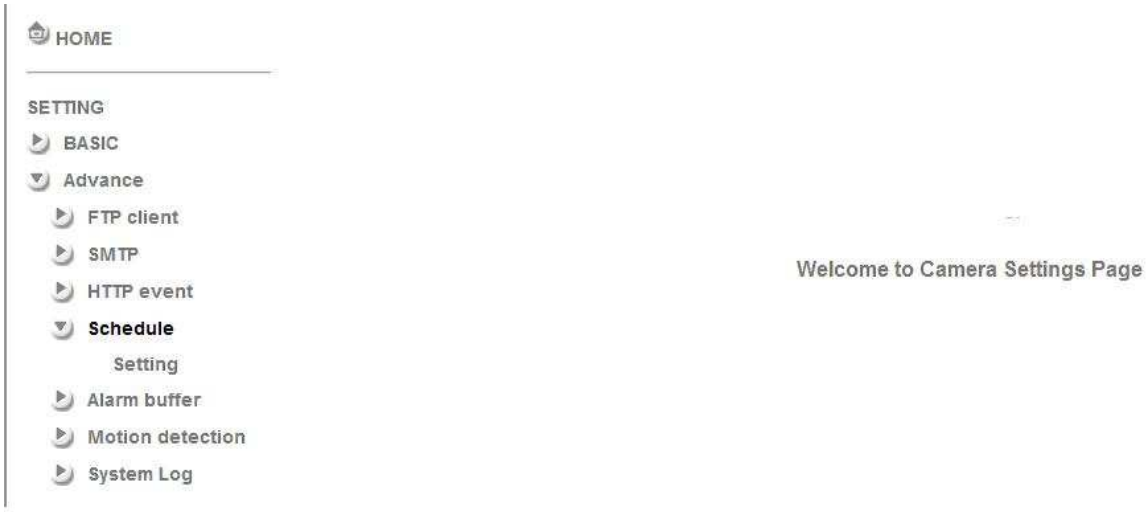
Note: You can set schedule function at schedule page. **(Please go "Setting → Advance → Schedule → Setting") For more details, you can check Chapter 6.4.**



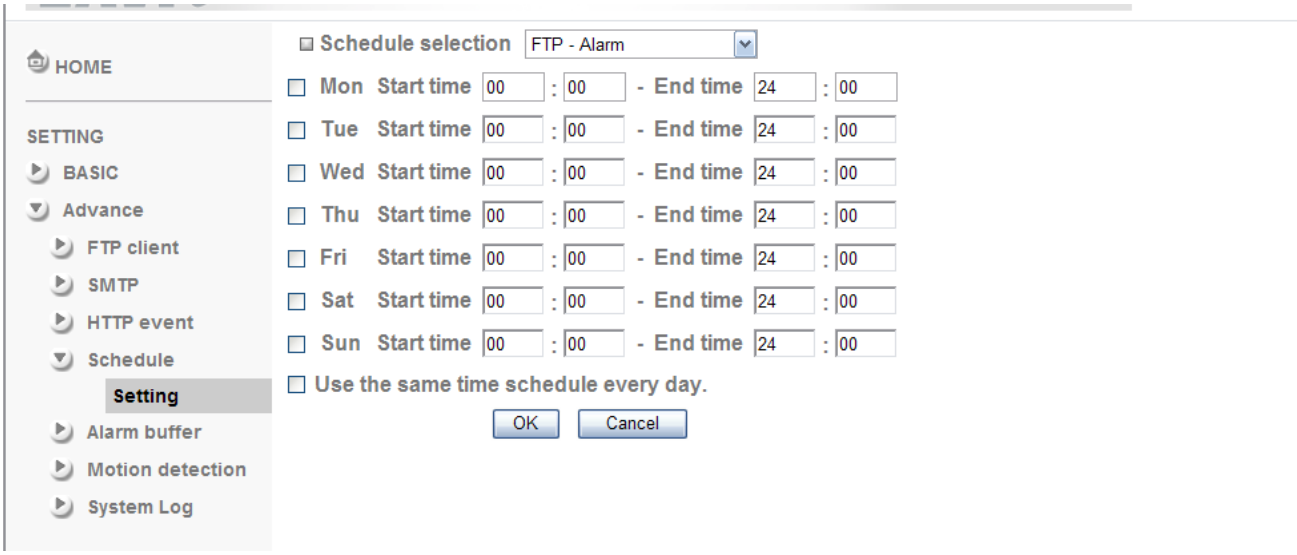
5.4 Schedule

When you click **Schedule** on the Advance mode menu, the Schedule setting menu appears. This is the same menu as the setting menu which is displayed when you click **Schedule** to set Effective period and Schedule in **FTP** client setting menu, e-Mail (**SMTP**) setting menu, Alarm out setting menu and so on.

Example: When setting e-Mail (SMTP) (the alarm sending) in the Schedule setting menu.



5.4.1 Setting



➢ **Schedule Selection**: Select the list box to specify the schedule you want to set.

- **FTP -Alarm**
- **FTP - Periodical**
- **e-Mail (SMTP) -Alarm**
- **e-Mail (SMTP) -Periodical**
- **HTTP event -Alarm**

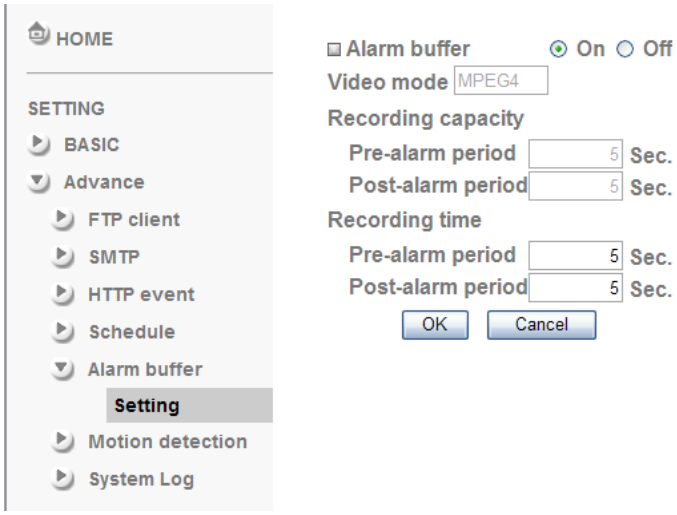
➢ **Mon (Monday) to Sun (Sunday)**: The time period on the right of the checked day is the effective period of the schedule.

➢ **Start time, End time**: Specify the **Start time** and the **End time**.

➢ **Use the same time schedule every day:** When this is checked, the **Start time** and **End time** set to **Mon** (Monday) are applied to all days. In this case, the **Start time** and **End time** of the other days than **Mon** (Monday) cannot be input.

5.5 Alarm buffer

You can set the Pre-alarm image and audio (the image and audio before the alarm detection) and the Post - alarm image and audio. These can be set when **Alarm sending** FTP client setting menu or Image memory setting menu is set to **On**, and besides when **Use alarm buffer** is selected.



5.5.1 Setting

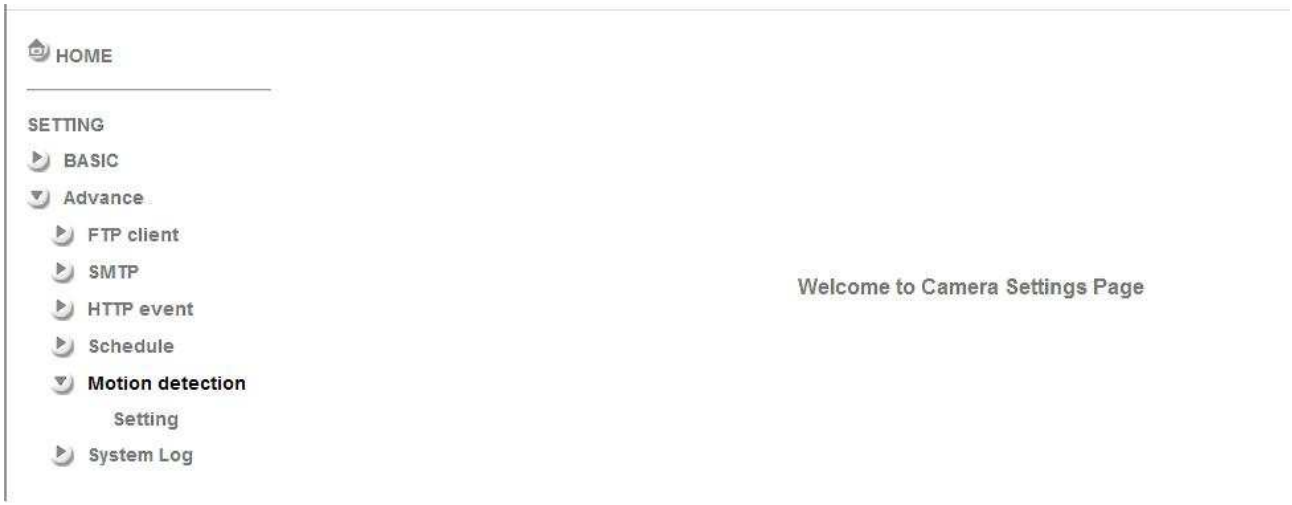
Alarm buffer: To activate the Alarm buffer function, select **On**. The basic setting options are displayed below. When you do not use the Alarm output function, select **Off**.

- **Recording capacity**
  - **Pre-alarm period**: Display the maximum recording capacity of image/audio before the alarm detection.
  - **Post-alarm period**: Display the maximum recording capacity of image/audio after the alarm detection.
- **Recording time**: Set the recording time for the Pre-alarm image/audio and Post alarm image/audio.
  - **Pre alarm period**: Type it with recording time of the image/audio before the alarm detection.
  - **Post alarm period**: Type it with recording time of the image/audio after the alarm detection.

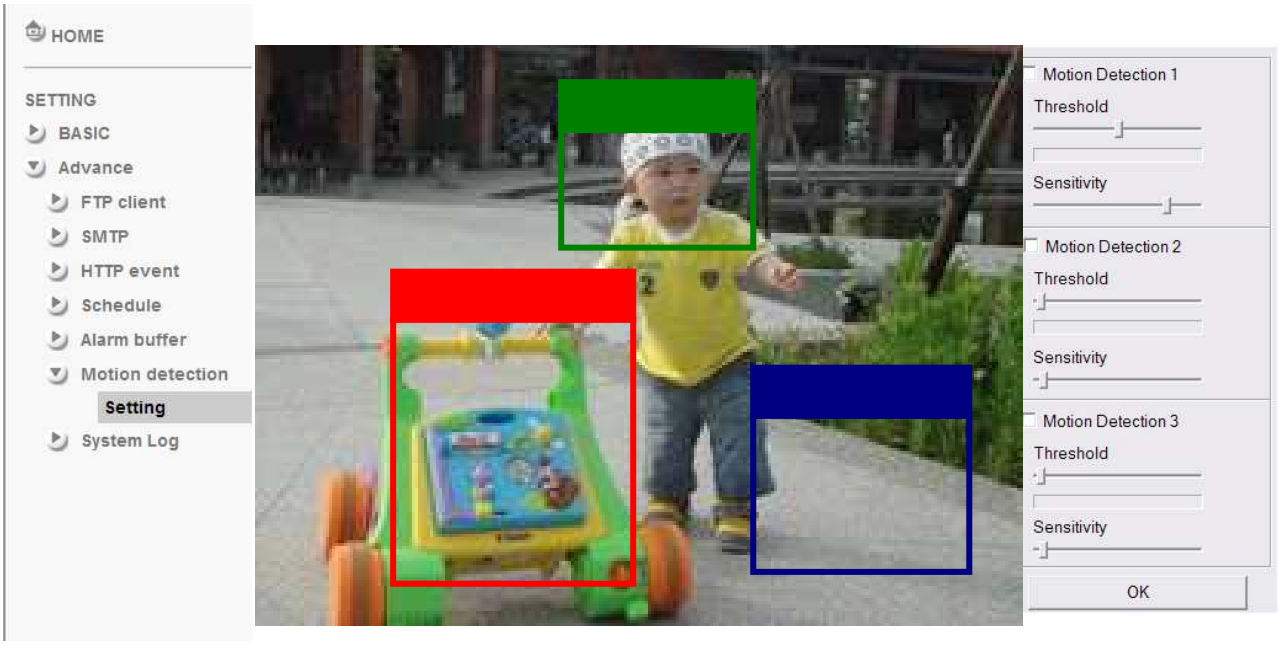
Note：The value of Recording capacity differs depending on Image size, Bitrate (for MPEG4) and Image quality (for MPEG4 and MJPEG) in the camera setting menu.

5.6 Motion Detection

There are three Motion Detection functions as sensors to set for different detecting zones. Each one has Threshold and Sensitivity inputs which you can adjust to specific zone sequentially. Motion Detection function can support to FTP, SMTP and Alarm output for capturing and sending images or starting alarm output.



5.6.1 Setting



➢ **Threshold**: It means the extent which the alarm will be triggered.

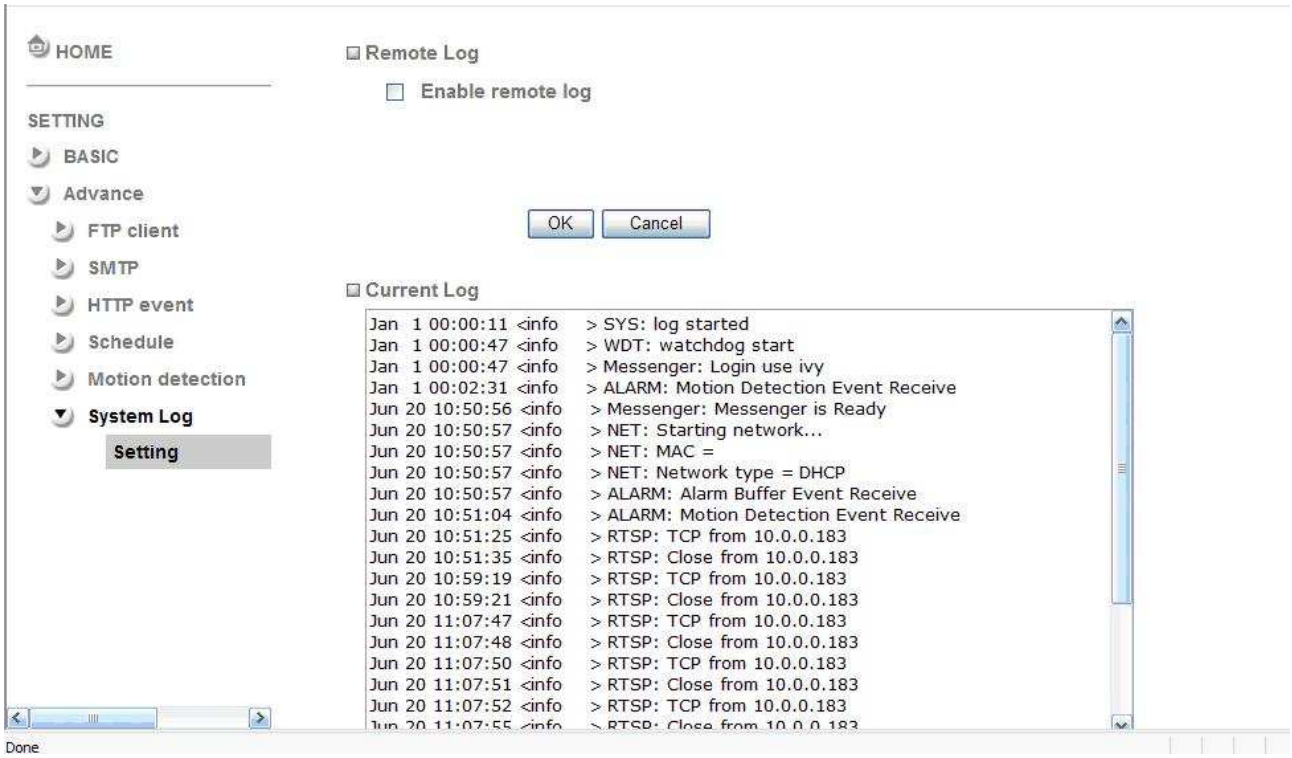
➢ **Sensitivity:** It means that how often the sensor will scan the image different. The higher sensitivity it is and the more frequently it scans.

●**Motion Detection 1**: Click it on for using **Motion Detection 1** function as a sensor. You can adjust and move the detecting zone by using mouse.
●**Motion Detection 2**: Click it on for using **Motion Detection 2** function as a sensor. You can adjust and move the detecting zone by using mouse.
●**Motion Detection 3**: Click it on for using **Motion Detection 3** function as a sensor. You can adjust and move the detecting zone by using mouse.

5.7 System Log

The System Log function allows users to review any changes and events happened. The system starts logging automatically after started.

5.7.1 Setting



- **Enable remote log**: Enables user to send the log data to a specified log server.

CHAPTER 6. APPENDIX

APPENDIX A – FRAME RATE & BIT RATE TABLE

This chapter provides tables that help you to optimize your IP camera with your network environment. Base on your network upload environment to choose the best Image-Quality setting.
For example, if the network environment is ADSL 256Kb(upload) / 2Mb(download), the most fluent Image-Quality needs to set up under 256 Kb situation.

A.1 MPEG4 @ 30fps / kbps

Quality	640*480	320*240	160*120
Excellent	**1000**	**300**	**90**
Detailed	**400**	**150**	**50**
Good	**300**	**100**	**30**
Standard	**250**	**70**	**25**
Medium	**250**	**55**	**20**

A.2 MPEG4 / kbps, fps

Image-Size	Bitrate Setting	Frame-Rate Setting	Current Bitrate	Current Frame-Rate
640*480	2048	30	**1800**	**26**
640*480	2048	15	**2200**	**16**
640*480	1536	30	**1500**	**30**
640*480	1536	15	**1700**	**16**
640*480	1024	30	**1000**	**30**
640*480	1024	15	**1000**	**16**
640*480	512	30	**500**	**30**
640*480	512	15	**600**	**16**
320*240	1536	30	**1500**	**30**
320*240	1536	15	**1600**	**16**
320*240	1024	30	**1000**	**30**
320*240	1024	15	**1000**	**16**
320*240	512	30	**550**	**30**
320*240	512	15	**600**	**16**
160*120	1024	30	**950**	**30**
160*120	1024	15	**750**	**16**
160*120	512	30	**500**	**30**
160*120	512	15	**50**	**16**
160*120	128	30	**130**	**30**
160*120	128	15	**140**	**16**

A.3 MJPEG @ 15fps / kbps

Quality	640*480	320*240	160*120
Excellent	**4000**	**1500**	**600**
Detailed	**2400**	**900**	**400**
Good	**1600**	**650**	**300**
Standard	**1300**	**500**	**240**
Medium	**900**	**350**	**170**

A.4 MJPEG / kbps, fps

Image-Size	Quality Setting	Frame-Rate Setting	Current Bitrate	Current Frame-Rate
640*480	Excellent	15	**4000**	**13**
640*480	Excellent	5	**1600**	**5**
640*480	Good	15	**1600**	**13**
640*480	Good	5	**650**	**5**
640*480	Medium	15	**900**	**14**
640*480	Medium	5	**360**	**5**
320*240	Excellent	15	**1500**	**13**
320*240	Excellent	5	**550**	**5**
320*240	Good	15	**650**	**13**
320*240	Good	5	**260**	**5**
320*240	Medium	15	**350**	**13**
160*120	Medium	5	**130**	**5**
160*120	Excellent	15	**600**	**13**
160*120	Excellent	5	**230**	**5**
160*120	Good	15	**300**	**13**
160*120	Good	5	**115**	**5**
160*120	Medium	15	**170**	**13**
160*120	Medium	5	**65**	**5**

APPENDIX B – STORAGE REQUIREMENT TABLE

This chapter provides tables that help you set your recording storage system.
Please refer to the following table to find out the capability for recording into your hard disk.

B.1 MPEG4 Storage Requirement GB / channel / day @ 30fps

Quality	640*480	320*240	160*120
Excellent	**10.5**	**3.2**	**0.9**
Detailed	**4.2**	**1.6**	**0.5**
Good	**3.2**	**1.1**	**0.3**
Standard	**2.6**	**0.7**	**0.3**
Medium	**2.6**	**0.6**	**0.2**

B.2 MPEG4 Storage Requirement GB / channel / day @ 15fps

Quality	640*480	320*240	160*120
Excellent	**5.3**	**1.6**	**0.4**
Detailed	**2.1**	**0.8**	**0.3**
Good	**1.6**	**0.6**	**0.2**
Standard	**1.3**	**0.4**	**0.1**
Medium	**1.3**	**0.3**	**0.1**

B.3 MPEG4 Storage Requirement GB / channel / day

Image-Size	Bitrate Setting	Frame-Rate Setting	Current Bitrate
640*480	2048	30	**23.0**
640*480	2048	15	**22.2**
640*480	1536	30	**18.5**
640*480	1536	15	**17.9**
640*480	1024	30	**10.5**
640*480	1024	15	**10.5**
640*480	512	30	**5.3**
640*480	512	15	**6.3**
320*240	1536	30	**15.8**
320*240	1536	15	**16.9**
320*240	1024	30	**10.5**
320*240	1024	15	**10.5**
320*240	512	30	**5.8**
320*240	512	15	**6.3**
160*120	1024	30	**10.0**
160*120	1024	15	**7.9**
160*120	512	30	**5.3**
160*120	512	15	**0.5**
160*120	128	30	**1.4**
160*120	128	15	**1.5**

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